

LESSON PLAN
FOR
REMEDIAL PHYSICAL TRAINING
CLASS F2 SCHOOL
A-050-0230

PREPARED BY
NAVAL AVIATION SCHOOLS COMMAND
181 CHAMBERS AVE SUITE C
PENSACOLA, FLORIDA 32508-5221

JANUARY 2005

LESSON PLAN
CHANGE RECORD

<u>Number and Description of Change</u>	<u>Entered By</u>	<u>Date</u>
---	-------------------	-------------

TABLE OF CONTENTS

CONTENTS

Change Record.....	2
Security Awareness Notice.....	5
Safety/Hazard Notice.....	5
DOR/TTO Policy.....	6

UNIT 1.0: Remedial Physical Fitness Course

- 1.1 Course Overview, Safety, and Risk Management
- 1.2 Injury Prevention, Shoe Selection and Hygiene
- 1.3 Beneficial Stretches/ Non-Beneficial Exercises and stretches
- 1.4 The Cardiovascular System
- 1.5 Principals of Training
- 1.6 Strengthening the Mind to Improve Physical Performance
- 1.7 Nutrition and Weight Control
- 1.8 Fitness Assessment (lab)
- 1.9 Strength Training (lab)
- 1.10 Warm up/Cool down (lab)
- 1.11 Aerobic Exercise (lab)
- 1.12 Anaerobic Exercise (lab)
- 1.13 Calisthenics (lab)

1.14 Water Exercises (lab)

1.15 Fitness Improvement Assessment (lab)

Annex A Resource Requirement List

Annex B Training Materials list

Annex C Skills Profile

Annex D Master Course Schedule

Annex E Instructional Management Plan

Annex F Remedial Fitness Exercise Schedule

Annex G Fitness Improvement Plan Chart

SECURITY AWARENESS NOTICE

This course does not contain any classified material.

SAFETY/HAZARD AWARENESS NOTICE

All personnel must be reminded that personal injury, death, or equipment damage can result from carelessness, failure to comply with approved procedures, or violations of warning, cautions, and safety regulations.

Review fire and environmental emergency procedures with class.

Caution: laser-pointing devices may be used during this course, to include remote controls. Refer to NAVAVSCOLSCOMINST 5100.12

MISHAP/HAZARD REPORTING

a. Safe training is the number one goal. Each year at training commands lives are lost, and thousands of man-hours and millions of dollars are wasted as the result of accidents. Most accidents could have been prevented. They are the result of actions performed incorrectly, either knowingly or unknowingly, by people who fail to exercise sufficient foresight, lack the requisite training, knowledge, or motivation, or who fail to recognize and report hazards.

b. A mishap is any unplanned or unexpected event causing personnel injury, occupational illness, death, material loss or damage or an explosion whether damage occurs or not.

c. A near miss or hazardous condition is any situation where if allowed to go unchecked or uncorrected has the potential to cause a mishap.

d. It is the responsibility of all Department of Defense personnel to report all mishaps and near misses. If a mishap, hazardous condition or near miss occurs let your instructor know immediately.

e. Instructors will report all hazardous conditions and near misses to the command training safety officer via their divisional/departmental training safety officer. Reports can be hand written on the appropriate form. Injuries will be reported on the appropriate form.

NATRACOM DOR AND TRAINING TIME OUT POLICY

All NATRACOM courses are voluntary. Accordingly, students have the option to individually request termination of training. Any time the student makes a statement such as "I quit" or "DOR", he or she shall be immediately removed from the training environment and referred to the appropriate division or training officer for administrative action.

Any time a student or instructor has apprehension concerning his or her personal safety or that of another, he or she shall signal for a "training time out" to clarify the situation and receive or provide additional instruction as appropriate. "Training time out" signals other than verbal shall be appropriate to the training environment and clearly indicated in the appropriate curriculum instructor lesson topic guides and student guides.

LESSON PLAN

January 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.1

LESSON TOPIC: Overview/Course
Introduction

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom instructor

INSTRUCTIONAL REFERENCES:

1. New Command Fitness Coordinator
Exercise Leader Handbook

2. NETCINST 1500.20D

INSTRUCTIONAL AIDS:

None

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

1.0 Upon completion of this unit of
instruction students will perform
required physical fitness tests
without injury to personnel or
damage to equipment

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

1.1 State training time out and drop on
request policies, safety
precautions, regulations and rules
used during training

CRITERION TEST:

None.

HOMEWORK:

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - In preparation to pursue your chosen field, you must become competent and achieve high levels of readiness in a variety of physical training areas. Increases in muscular strength and muscular endurance will certainly improve your ability to function effectively in the physical training environment.
2. Lesson overview - The purpose of this lesson topic is to introduce the student to various training techniques.
 - a. Lesson Topic: Introduction/course overview
 - b. Major Teaching Points:
 - (1) Course overview
 - (2) Course rules
 - (3) Safety requirements
 - (4) DOR/TTO/Student Safety

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

- (5) Define wellness
- (6) Define fitness

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Course overview

1. Injury Prevention
2. Stretches
3. Cardiovascular system
4. Principles of Training
5. Sports Psychology
6. Nutrition
7. Fitness Assessment (lab)
8. Strength Training (lab)
9. Station Training (lab)
10. Aerobic Training (lab)
11. Anaerobic Training (lab)
12. Calisthenics Training (lab)
13. Water Exercise (lab)
14. Fitness Improvement Assessment (lab)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

B. Course rules

1. Start times -
2. Organizational clothing -

C. Safety Regulations/Rules

1. Gym -
2. Weather -
3. Buddy system -
4. High Risk Training -
5. Mishap and Unsafe Condition Reporting
 - a. Mishap
 - b. Hazardous conditions
 - c. Near miss

Instructor shall read verbatim the mishap, hazardous condition, and near miss procedures from front matter.

D. Drop on Request (DOR)

The Remedial Physical Training Course is voluntary training. Accordingly, students have the option to individually request termination of training.

Read verbatim the DOR policy written in this curriculum's Front Matter Foreword on page iii or verbatim from NETC instruction 1500.20D.

Discuss thoroughly with

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

E. Training Time Out (TTO) Policy

A TTO may be called in training situation whenever a student or instructor expresses concern for personal safety or a need for clarification of procedures or requirements exists.

the IUT's this policy from the standpoint of students and as future Instructors. Emphasize DOR is in effect for the duration of the course.

Solicit questions.

Read verbatim the TTO policy written in this Curriculum's Front Matter Foreword on page iv or verbatim from NETC Instruction 1500.20D.

Instructors are responsible for maintaining situational awareness and shall remain alert to signals of student panic, fear, extreme exhaustion, or lack of confidence that may impair safe completion of the training exercise. Instructors shall immediately consider such action appropriate.

Following a TTO the training situation shall be examined and additional explanation/instruction

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

will be provided as
necessary.

F. Define wellness

1. A multifaceted approach to optimal health that emphasizes the individual's deliberate effort to stay healthy and achieve the highest potential for well being.
2. Wellness is an ongoing process which requires daily decisions made by you in the areas of:
 - a. Proper nutrition
 - b. Stress management
 - c. Disease prevention
 - d. Substance abuse control
 - e. Physical fitness

G. Define fitness

1. Physical fitness is defined by the American Medical Association as the general capacity to adapt and respond favorably to physical effort.
2. A physically fit individual is able to perform normal daily activities effectively and have energy remaining for the other activities of life (emergencies, leisure or recreational activities, etc.)
3. Physical fitness can be divided into two

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

categories of physiological ingredients.

- a. Health-related fitness components to include:
 - (1) Strength, dynamic strength (muscular endurance), flexibility, cardiovascular endurance and body composition.
- b. Performance or skill-related fitness components, including:
 - (1) Coordination
 - (2) Agility
 - (3) Power
 - (4) Balance
 - (5) Speed
 - (6) Accuracy

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

None.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.2

LESSON TOPIC: Injury Prevention, Hygiene
and how to chose the right
running shoe.

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

- 1 Classroom instructor
- 1 Assistant Instructor

INSTRUCTIONAL REFERENCES:

- 1. Cooper Institute
- 2. New Fitness Coordinator Exercise
Leader Handbook
- 3. Naval Special Warfare Calisthenics

INSTRUCTIONAL AIDS:

- 1. Power point presentation (optional)

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of
instruction students will perform
required physical fitness tests
without injury to personnel or damage
to equipment.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.2 Describe factors influencing
injuries.
- 1.3 Describe treatment of injuries
related to physical training.
- 1.4 Explain prevention of sports related
health problems.
- 1.5 Explain how to choose the right shoe.

CRITERION TEST:

None

HOMEWORK:

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

Injuries should be prevented and when treated properly will improve your ability to function effectively in the physical training environment. Wearing the wrong shoe for foot type will cause injuries. Choosing the right shoe will help alleviate minor injuries.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

(a) Lesson Topic: Injury Prevention and Hygiene

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(b) Major Teaching Points:

- (1) Factors influencing injuries
- (2) Types of injuries
- (3) Musculoskeletal risk factors for exercise
- (4) Treatment of injuries
- (5) Athletes Foot
- (6) Ring Worm
- (7) Jock/Crotch Itch
- (8) Clothing

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Factors influencing injuries

1. The body was designed to take physical strain and abuse.
 - (a) However the most dangerous abuse that you can inflict on your body is not to use it.
 - (b) Effects of a sedentary lifestyle are not easily overcome.
 - (c) You cannot undo 15 years of inactivity in a matter of a few weeks.
 - (d) A sudden, severe change in the level of physical activity can result in strained muscles or even more serious injuries.
 - (e) Be realistic about expected improvements when beginning an exercise program.
 - (f) Many injuries are caused from overuse. Overuse means that you have simply pushed to hard, too fast or too long.
2. Key consideration in preventing injuries is exercising in moderation.
 - (a) Take time to warm up and cool down.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (b) Define realistic goals at each step of your fitness program.
 - (c) Improvement will come, but they must be brought about slowly and steadily over a period of time.
 - (d) Attempting to rush this schedule is asking for trouble.
3. When you experience pain.
- (a) Decrease your activity level or stop exercising altogether.
 - (b) Pay attention to unexplained soreness, lower resistance, depression and chronic fatigue.
 - (c) Most sports injuries can be taken care of with a minimal effect and plain common sense.
4. Make sure that you and your competition are well matched.
- (a) Do not compete with people who are more skilled than you.
 - (b) Do not run with someone who is faster than you, it may make you push yourself to the brink of injury. Apply this rule with any exercise.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Do not lift weights that are beyond your capability. When lifting weights, be sure to have a spotter.
6. Facilities and equipment are very important to injury prevention.
 - a. Make sure they are adequate.
 - (1) Activities on an improperly maintained playing field can result in injury. If the field is wet, proceed with caution to avoid slipping.
 - (2) Run on soft surfaces (dirt or grass) instead of concrete or blacktop whenever possible.
 - (3) If sports call for protective equipment, wear it! Examples include: helmets while bike riding, shin guards and cleat shoes for soccer, and eye guards for racquetball.
 - (4) Know how to use the equipment properly and maintain it in good condition.
 - (5) Know when to replace your equipment.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (6) Use the proper shoe for the sport that you play.
- (7) Avoid certain exercise that are known to cause injury, (these exercises will be discussed in another lesson).

B. Types of injuries

1. Blisters

- (a) A fluid filled sack that form where the skin is rubbed excessively.
- (b) They are encountered when breaking in a new pair of shoes.
- (c) Properly fitted shoes and socks that do not bunch will assist in preventing blisters.
- (d) First aid treatment.
 - (1) Under normal conditions do not break the blister.
 - (2) If continuing on a long event, puncture the edge of the blister with a sterile needle and drain the fluid.
 - (3) Apply an antiseptic and cover with a clean dressing.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (4) Blisters can become infected, so keep the area clean and check frequently.
 - (e) Prevention
 - (1) Clothes should be comfortable, fit properly and offer adequate protection against the weather
- 2. Shin splints
 - (a) Characterized by a sharp pain in the front portion of the lower leg from inflammation of the muscle or tendons.
 - (b) Usually associated with sudden changes in the frequency, duration and intensity of exercise often occurring in conjunction with running on hard surfaces.
 - (c) Therapy: appears to be total rest, even light levels of exercise appear to interfere with the healing process.
 - (d) Prevention is best accomplished by using proper footwear, increasing exercise volume gradually and choosing the right type of exercise surface.
- 3. Fractures
 - (a) Complete fracture occurs when a bone breaks

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

in two or more pieces.

- (b) Stress fractures are hairline cracks that often occur in the bones of the feet or shins, usually associated with running.
- (c) Symptoms - Pain around the fractured bone.
- (d) First Aid
 - (1) Immobilize the joint.
 - (2) Elevating the appendage.
 - (3) Call for medical assistance immediately.

4. Strains

- (a) An injury to a muscle.
- (b) Stretched or torn usually because of overstretching, sudden or violent wrenching.
- (c) First Aid
 - (1) Best treatment for a typical muscle strain is to apply a cold compress to the injury site during the first 48 hours following injury.
 - (2) This should be accompanied by rest and elevation of the injured area.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) Heat may be applied after the first 48 hours.

5. Sprains

- (a) A joint injury associated with over extension.
- (b) Sudden or violent twisting of the joint ligaments are stretched or torn.
- (c) First Aid is the same as muscle strain.

6. If difficult to determine whether the injury involves a broken bone or a sprained joint, (any doubt) the safe course of action is to have the injury examined by a Medical Officer. Take this action if the injury does not respond to the treatment described within 48 hours.

C. Musculoskeletal risk factors for exercise

1. Low back pain.

- (a) Safest course of action for this condition is to seek treatment from a Medical Officer.
- (b) This is especially true for conditions such as Lordosis (an excessive forward curvature of the spine) or Scoliosis (an excessive lateral curvature of the spine).

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Obesity

- (a) Exercise programs for obese individuals need to be modified because of the greater chance of musculoskeletal injury and overexertion.
- (b) Obesity is often accompanied by Hypertension, Hyperlipidemia and diabetes. Can also have Coronary Heart Disease Risk Factors.
- (c) Generally obese individuals have a low muscle mass relative to fat and have a low aerobic capacity.
- (d) Their programs should minimize weight bearing and excessive shock to the joints.
 - (1) Swimming
 - (2) Cycling
 - (3) Rowing
 - (4) Walking
- (e) All are more appropriate for obese individuals than jogging.
- (f) Greater emphasis should be placed on duration rather than intensity of exercise, since exercise duration is more effective in weight

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

control.

- (g) Obese individuals cannot dissipate heat well, so strenuous exercise should be avoided on hot, humid days.
- (h) Water activities are recommended for obese individuals since the body is supported by water and the risk of joint and muscle injury is reduced.

3. Chondromalacia

- (a) Described as softening of the cartilage.
- (b) Is an overuse injury of the knee in which the kneecap becomes softened or roughened on the backside.
- (c) It is a runner's injury.
- (d) Occurring in people with a biomechanical abnormality such as pronation of the foot, knock-knee, or a misaligned knee cap.
- (e) These abnormalities cause the back of the kneecap to rub against the end of the femur(upper leg), creating pain.
- (f) A person with this condition should not be running or doing weight bearing exercises.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (g) Cycling is excellent for rehabilitation as long as a very low gear and high revolutions are used, and only if the cycling does not cause pain.
- (h) Orthopedic problems of this type may be reduced or alleviated by performing exercises which eliminate or reduce weight bearing and are conducted in water.

D. Treatment of injuries

1. P.R.I.C.E.

- (a) **P**rotect the part.
- (b) **R**est a day or two.
- (c) **I**ce as soon as possible. Wrap the ice in a towel and move the towel every few minutes avoid frostbite. Ice reduces swelling and pain by constricting the blood vessel and reducing blood flow to that area.
- (d) **C**ompress the area with an elastic bandage for 30 minutes, remove it for 15 minutes and compress for another 30 minutes. If the area is numb, the bandage is too tight. Compression also aids in the reduction of swelling.
- (e) **E**levate the injured part to help drain excess

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

fluid from the area. This should be done even while sleeping.

2. You should seek a Medical Officer if:
 - (a) You cannot move the injured part
 - (b) The injury is not healing
 - (c) Pain persists or is severe
3. Heat
 - (a) Heat may be applied 48 hours after an injury, once the swelling has subsided.
 - (b) Heat increases circulation, helping to reduce any residual swelling.
 - (c) The increased circulation also brings in more nutrients to provide energy for healing, including proteins, the body's building blocks.
4. Anti-inflammatory agents and pain relievers
 - (a) When inflammation occurs, such as arthritis anti-inflammatory agents may be necessary to reduce the inflammation.
 - (b) Ibuprofen is the active ingredient found in anti-inflammatory drugs such as.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (1) Motrin
 - (2) Advil
 - (c) Once the inflammation is under control, rehabilitation can begin.
 - (d) Starting exercise before inflammation is reduced can increase the inflammation.
 - (e) Pain relievers may be used for intense pain while the injury heals.
 - (f) But they should never be used to mask pain so that physical activity can be continued. This will only aggravate an injury and prolong recovery.
5. Rehabilitation
- (a) Rehabilitation requires days or months depending on the nature and severity of the injury.
 - (b) Rehabilitation should not be started until the pain is gone.
 - (c) Severe injury rehabilitation should be under the supervision of a physician or physical therapist.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (d) It should be started gently and intensified gradually.
- (e) Patience is important.
- (f) Returning to intense exercise too quickly invites re-injury.
- (g) Rehabilitation is not complete until the injured part has:
 - (1) Normal range of motion
 - (2) Normal strength
 - (3) Normal function
- (h) Until recovery is complete, it is advisable to pursue a low-impact form of exercise, such as swimming or cycling, especially if the injury occurred in the leg.

E. Athletes Foot

- 1. Is a fungus that causes scaling and cracking of the skin. The area between the toes is especially susceptible and may reveal blisters containing a thin, watery fluid.
- 2. Treatment
 - (a) Antifungal Medication

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (b) Proper hygiene to include washing and drying the feet well.

3. Prevention

- (a) Proper laundering of towels and clothing
- (b) General cleanliness in showers and dressing rooms
- (c) Use of fungicidal agent to disinfect benches and floors, plus frequent hosing of shower areas.
- (d) Good personal hygiene

F. Ring Worm

1. Ringworm of the nail beds is a chronic infection involving one or more of the nails of the hand or foot. Either the nail gradually thickens, discolors, becomes brittle, and has caseous-appearing material form beneath it, or it becomes chalky and disintegrates.
2. Treatment
 - (a) Antifungal Medication
 - (b) Proper hygiene to include washing and drying the feet.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Prevention

- (a) Proper laundering of towels and clothing
- (b) General cleanliness in showers and dressing rooms
- (c) Use of fungicidal agent to disinfect benches and floors, plus frequent hosing of shower areas.
- (d) Good personal hygiene

G. Jock/Crotch itch

- 1. A fungous infection occurring in the area of the upper thighs. Growth of this organism is favored by obesity and tight clothing and is often recurring.
- 2. Treatment
 - (a) Antifungal Medication
 - (b) Proper hygiene to include to washing and drying the Thigh area.
- 3. Prevention
 - (a) Proper laundering of clothing

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(b) Try to loosen clothing around the thigh.

(c) Good personal hygiene

H. Clothing should be clean and comfortable, fit properly, and offer adequate protection against the weather. Wear protective equipment to shield your body parts from injury.

I. How To Select The Right Shoe

1. Choosing a running shoe that is suitable for your particular type of foot can help you avoid some common running related injuries. It can also make running more enjoyable and let you get more mileage out of your shoes.
2. Feet normally fall into 1 of 3 categories. Floppy feet are very loose-jointed. These feet need shoes that are built to control the foot's motion. Rigid feet are very tight-jointed and do not yield enough upon impact. These feet need shoes that cushion the impact of running. And finally there are normal feet, which fall between floppy and rigid. These types of feet can use any running shoe that is stable and properly cushioned.

(a) Rigid Foot

- (1) Tends to stay rigid and does not conform to the ground. Indicated by extreme wear on outside of shoe sole. The outside edge

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

of the sole is broken down from rolling out. This type of foot will have a high arch.

- (2) Typical injuries from this type of foot are injuries, shin splints, stress fractures, knee pain, hip pain, heel pain and ankle sprains.
- (3) Select a shoe with maximum shock absorption and cushioning, dual density midsole, with the firmer denser portion on the outer edge, flexible sole, elevate heel and avoid flared heel.

(b) Normal Foot

- (1) Tends to conform to the ground without excess motion. Indicated by slight wear on the outside of the shoe sole. This type of foot will have a normal arch.
- (2) Typical injuries from this type of foot would be none.
- (3) Select a shoe with balance of motion control and cushioning, flexible sole and a durable outsole appropriate for the running surface.

(c) Floppy Foot

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (1) Rolls in excessively toward the midline of the body as it bears weight. Indicated by extreme wear on inside and outside of the shoe sole. The inside edge of the sole is broken down from rolling in. This type of foot is flat.
 - (2) Typical injuries from this type of foot are arch pain, heel cord pain, shin pain and knee pain (kneecap or inside of knee).
 - (3) Select a shoe with dual density midsole with the firmer, denser area on the inside, external heel counter and good arch support.
- (c) The shoes' ability to protect you from injury decreases as the mileage on them increases. Replace the shoes when they have accumulated 500 to 700 miles even if they show little wear.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

None.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.3

LESSON TOPIC: Beneficial Stretches
Non-Beneficial Exercises
and Stretches

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom instructor

INSTRUCTIONAL REFERENCES:

1. Cooper Institute
2. Naval Special Warfare Sports Medicine
conference

INSTRUCTIONAL AIDS:

1. None.

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of
instruction students will perform
required physical fitness tests
without injury to personnel or damage
to equipment.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.6 Identify stretching principles.

- 1.7 Identify non-beneficial exercises.

CRITERION TEST: None

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

In order to prevent injuries and promote longevity one must become knowledgeable of good and bad exercises. Stay away from exercises/stretchers where risk out-weigh benefits. The risk is not worth the benefits.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

a. Lesson Topic: Exercises

b. Major Teaching Points:

- (1) Stretching principles
- (2) Beneficial stretches
- (3) Non-Beneficial exercises/stretchers

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Stretching Principles

1. The body responds to a sustained stretch (greater than 15 seconds).
2. Go to the point of a slight stretch discomfort not a painful stretch. DO NOT BOUNCE. Try to relax when stretching.
2. Prior to stretching do a general conditioning exercise such as jump jacks/side straddle hops to warm up the muscles and "Get the blood flowing". At least give those muscles that will be stressed during the exercise a comprehensive stretch.

B. Beneficial Stretches

1. Back Benders
 - a. Primary Benefit to (PBT) the Hamstrings, hip and thigh adductor.
 - b. Description: Instruct students to stand with feet at shoulder width apart and to keep their back straight to prevent lower back injuries. Lean forward for the count of 10-15, relax stretch, lean back for the count of 10-15, relax stretch, continue with exercise from side to side for the same count.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Buds/Knee (Iliotibial Band Stretch)
 - a. PBT, Iliotibial band. This is an excellent stretch to prevent the commonly injured ITB during running.
 - b. Description: Perform while seated, with one leg extended. Hook other foot over left leg, near the knee. Turn the upper torso toward the bent leg stretching the iliotibial band of that leg. Use the elbow on the side of the straight leg to hold the stretch.
3. Chest Stretch
 - a. PBT: Front of shoulders, pecks (anterior), and chest.
 - b. Description: Begin from a standing position with arms extended to the side at shoulder level. While keeping the thumbs pointed up extend the arms backward. Either have another person hold the stretch or use a pole for resistance
4. Swimmer's Stretch
 - a. PBT: Chest and anterior shoulder muscles
 - b. Description: Perform this exercise either seated or standing without bending over. This stretch should be performed with thumbs pointing downward throughout the stretch. Clasp hands together behind the lower back, palms up, slowly pull the arms up and toward the head.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Groin Stretcher/Butterflies
 - a. PBT: leg adductor
 - b. Description: Begin by sitting with legs bent and the bottoms of the feet together. Grasp the feet and push the legs to the floor using the elbows while bending the upper torso toward the feet.
 - c. Butterflies (keep the back straight and grab the ankles not the toes).
6. Groin Stretch
 - a. PBT: Leg adductors
 - b. Description: Begin standing, with legs far enough apart to allow for sufficient stretch and toes pointed slightly outward. Shift body weight to one side while bending the leg on that side. The stretch should be felt on the inner thigh of the straight leg.
7. Inside Hurdlers Stretch (Hamstrings)
 - a. PBT: Hamstrings
 - b. Description: From the sitting position extend one leg out while tucking the other leg in front of the hips with the knee pointing outward. Bend the torso forward toward the knee of the extended leg stretching the muscles in the back of the leg. Reach with the same hand to same foot.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

8. Seated head to knee (sitting)
 - a. PBT: leg flexors
 - b. Description: From the sitting position, extend the legs forward and bend the torso toward the knees, maintain a slight bend in the knees, stretching the back of the legs.
9. Single Leg Hamstring
 - a. PBT: leg flexors
 - b. Description: From the sitting position, bring one knee up to the chest and extend the leg. Hold the stretch by grasping behind the knee. Keep back flat throughout the stretch.
10. Gastrocnemilis/Soleus Stretch
 - a. PBT: Gastroc/Soleus
 - b. An excellent pre-running/walking exercise
 - c. Description: Standing away from the wall step back with one foot. Press hips forward slightly bending the forward knee and raising the back heel off the ground. Flex the foot stretching the calf muscles. Keep the leg of the stretched muscle straight.
11. Rotator Cuff
 - a. PBT: Shoulder (posterior deltoid)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Description: Bring the arm that is to be stretched across the chest. Use the opposite arm to pull the arm being stretched towards the chest until the stretch is felt in the posterior shoulder.

12. Trunk Side to Side

- a. PBT: Abdominal
- b. Description: Standing arms straight either above the head or straight to the sides bend the torso to the side and hold. Return to starting position and repeat to the other side.

13. Tricep Stretch

- a. PBT: Triceps
- b. Description: Standing erect, bring the arm to be stretched up and back so that the elbow is pointing toward the sky and the hand rests between the shoulder blades. Gently pull the arm toward the midline behind the head to stretch the tricep muscle.

14. Trunk Twisters (Seated)

- a. PBT: abdominals
- b. This stretch should be performed from a seated position (instead of standing) to avoid placing stress on the knee.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- c. Description: Starting from the seated position with hands behind the head, twist the upper torso to one side, and then to the other.

15. Cherry Pickers (Seated)

- a. PBT: Hamstrings
- b. Description: Begin from a seated position with legs extended out and to the side as far as possible, gently bend using opposite hand to toe for 15 seconds and relax. Extend both hands above your toes, stretching the hamstring and repeat to other side.

16. Lower Back Stretch

- a. PBT: lower back
- b. Description: While lying on back (supine), bring one knee up and toward the chest. Place the hands behind the knee and gently pull leg toward the chest, stretching the back muscles.

17. Supine Back Stretch

- a. PBT: lower back
- b. Description: While lying on back (supine) bring both knees up; and toward the chest. Place the hands behind the knees and gently pull both legs toward the chest, stretching the back muscles.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

18. Quadricep Stretch

- a. PBT: Quadricep
- b. Description: From the prone or standing position, bend one leg back toward the buttocks stretching the front of the bent leg. Use the hand on the same side as the bent leg to hold the stretch. Knees should be kept parallel and together. Can be performed from the standing position.

19. Abdominal Stretch

- a. PBT: abdominal
- b. Description: Lying on stomach (prone) with hands flat on the deck similar to a push-up, extend the arms so that the upper torso lifts off the deck.

20. Achilles Stretch

- a. PBT: Achilles tendon
- c. Description: Start from the standing position, step forward bending slightly at both knees allowing the back heel to come off the ground approximately 1 inch. Press down the back heel stretching the achilles tendon.

21. Iliopsoas Stretch

- a. PBT: iliopsoas muscle

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Description: Begin from a standing position. Step forward with one leg, placing one foot in front of the other. Keep both legs slightly bent. Weight should be distributed toward the front foot. Flatten the back and tuck the hips under, stretching the iliopsoas muscle on the front of the back leg.

22. Hip Stretch

- a. PBT: hip extensors
- b. Description: Begin lying with back on the deck, knees bent, and feet flat on the deck. Cross one leg so that the ankle is resting on the knee of the other leg. Slowly lift the one leg off the deck and move it toward the chest. Stretch should be felt in the hip of the crossed leg.

23. Penguin Walk

- a. PBT: gastrocnemius and conditioning exercise for the anterior tibialis
- b. While standing with the weight over the heels, flex feet and toes upward, stretching the calf muscles. Maintain this position and walk on the heels.

D. Non-Beneficial Exercises / Stretches

These exercises do provide aerobic or anaerobic conditioning however the risk of injury is high.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Plyometric Star Jumps
 - a. This exercise puts a large shearing force on the knee because the starting position for the knees is at a position greater than 90 degrees flexion.
2. Standing Calf Stretch
 - a. Potential for injury to the back.
 - b. Description: In the standing position bend over grab toes and pull up.
3. Mountain Climbers
 - a. Knees are flexed greater than 90 degrees and absorbing force.
4. Cross-overs (standing hamstring)
 - a. Potential for low back injury.
5. Two and Four count Windmills
 - a. Bending over at the waist with knees straight increases spinal disc pressure by 400 percent.
6. Cherry Pickers (Standing)
 - a. Ballistic Stretches (bouncing) are counter productive and bending over at the waist with the legs straight.
7. Thigh Stretch (2 person)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Over pressure on the leg increases the likelihood for injury to the knee.
- 8. Lat Pull Down (behind neck)
 - a. Perform pull downs in front to top of chest
- 9. Back Stretch (yoga plow)
 - a. Potential injury to the spine.
- 10. Hand to Toe Sit-ups
 - a. Places mechanical stress on the back.
- 11. Standing Head to Knee
 - a. Potential for injury to the discs and lower back. Bending over statically at the waist increases spinal disc pressure by 400%.
- 12. Inverted Cycling
 - a. May compress cervical (neck region) vertebrae

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

None.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.4

LESSON TOPIC: Cardiovascular disease

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom instructor

INSTRUCTIONAL REFERENCES:

1. Command Fitness Coordinator Exercise
Leader Handbook

INSTRUCTIONAL AIDS:

1. Powerpoint presentation (optional)

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

1.0 Upon completion of this unit of
instruction students will perform
required physical fitness tests
without injury to personnel or damage
to equipment.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

1.8 Explain cardiovascular disease.

1.9 Describe the disease process.

1.10 Identify primary risk factors.

CRITERION TEST:

None

HOMEWORK:

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - Explain to the student that he or she should understand the importance of cardiovascular fitness in the prevention of cardiovascular disease. Having an understanding of the process and risk factors will help you make the right choices towards preventing cardiovascular disease.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

a. Lesson Topic:

b. Major Teaching Points:

- (1) Cardiovascular disease
- (2) Disease process

DISCUSSION POINT

- (3) Primary risk factors
- (4) Secondary risk factors

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Cardiovascular Disease (CVD)

1. Disease of the heart and/or the circulatory system. Leading cause of death in U.S.
2. Four Major Types of CVD
 - a. Coronary Heart Disease
 - (1) Build up of fatty plaque in coronary arteries.
 - (2) Plaque ruptures then clots from causing heart attacks.
 - (3) 1.5 million heart attacks each year.
 - b. Cerebrovascular (stroke)
 - (1) Build up of fatty plaque/clots in the brain.
 - (2) Some strokes are caused by ruptured blood vessels.
 - c. Congestive Heart Failure (CHF)
 - (1) The heart pumps out less than it receives
 - (2) Leads to swelling of the heart, lungs, and ankles.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(3) Always Fatal

d. Peripheral Vascular Disease

(1) Buildup of fatty plaques/ clots in extremities.

(2) Causes limb pain, gangrene, amputation

(3) Mostly in smokers and diabetic's

B. Disease process

1. Supply blood to the heart muscle

a. Supplies oxygen, nutrients, and removes waste

b. Arteries narrowed by plaque

c. Plaque cracks ---> clot formation
100% blockage meaning no oxygen, heart tissue becomes anoxic (without oxygen) and the then heart tissue may die.

C. Primary risk factors

1. Cigarette Smoking

a. Smokers are more than twice as likely to have a heart attack as non-smokers and two to four times as likely to have a cardiac arrest.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Cholesterol
 - a. Genetics, diet, physical activity, percent body fat, stress, age, gender, are all factors that affect cholesterol levels
 - b. Regular aerobic exercise, decrease saturated fat intake, decrease cholesterol intake, increase Soluble fiber intake, loss of body fat, stress management and the control of diabetes are lifestyle factors that can decrease LDL-C.
 - c. Regular aerobic exercise, loss of body fat, Smoking cessation, and decrease blood triglyceride levels are lifestyle factors that increase HDL-C
3. High Blood Pressure (Hypertension)
 - a. Uncontrolled high blood pressure can damage blood vessels in the heart, kidneys, and others organs.
 - b. High blood pressure is usually controllable, treatment may include diet changes and increased exercise. Medication to lower the blood pressure may be used if diet and exercise are ineffective.
4. Diabetes
 - a. Major causes of non-insulin dependent diabetes are upper body obesity and sedentary lifestyle.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Regular aerobic exercise, decrease simple sugar intake, loss of body fat, control of diabetes, and increase dietary fiber increase are all factors that decrease blood glucose.
- 5. Family history
 - a. Family history of heart disease is good indication of you having heart disease.
- 6. Sedentary lifestyle
 - a. People who lead sedentary lives may have a higher risk of heart attack than those who get regular, vigorous exercise.
- 7. Age
 - a. Men over the age of 45 and women over the age of 55.
- 8. Obesity
 - a. Is defined as 20 percent more than your desired body weight.
 - b. Obesity increases the risk of CHD by typically increasing blood cholesterol, triglyceride, glucose, and insulin level, as well as blood pressure.
 - c. Upper body obesity is the worst.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

D. Secondary risk factors

1. Elevated blood Triglyceride level

- a. Levels greater than 150mg/dl are associated with increase risk of CHD.

2. Stress

- a. Chronic stress can have an adverse impact on high blood pressure, blood lipid values, and leads to a risk of CHD.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

None

EVALUATION

None

ASSIGNMENT

None

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230
CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.5

LESSON TOPIC: Principles of Training

ALLOTTED LESSON TIME: 2.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom instructor

INSTRUCTIONAL REFERENCES:

1. Cooper Institute
2. New Fitness Coordinator Exercise Leader Handbook
3. Naval Special Warfare Calisthenics

INSTRUCTIONAL AIDS:

1. Powerpoint presentation (optional)

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.11 Identify training principles.
- 1.12 Define physiology of energy utilization.

CRITERION TEST:

None

HOMEWORK:

None

INTRODUCTION

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.

2. State background, schools, duty stations, etc.

3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - Explain to the students that knowing the principle of training he or she will be able to train safe and effectively. Train smarter not harder.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

The purpose of this lesson topic is to introduce the student to the muscles of the human body, fitness program components and the principles of training.

Briefly outline material to be covered.

a. Lesson Topic: Principles of Training

b. Major Teaching Points:

- (1) Muscle fitness
- (2) Principles of training
- (3) SAID principle

DISCUSSION POINT

- (4) Fitness program components
- (5) Strength
- (6) Other training considerations
- (7) Physiology of Energy Utilization

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Muscle fitness

1. Combination of muscular strength and muscular endurance.
 - a. The ability of the muscle to exert maximal force during a single contraction.
 - b. The ability of the muscle to sustain repeated muscular contractions without undue fatigue.
2. Muscle tissue growth is termed hypertrophy while muscle tissue degeneration is termed atrophy.

B. Principles of Training

1. Overload - Exposing the body to loads greater than which is accustomed to.
2. Specificity - The type of adaptation is specific to the type of exercise.
3. Adaptation - Body adapts by changing structure or function in rest.
4. Progression - Continually applying overload to experience gain (training effect).
5. F.I.T.T. Principle
 - (a) Frequency (of exercise)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(b) Intensity (how hard)

(c) Time (duration)

(d) Type (specificity)

C. S.A.I.D. principle

1. The body operates on Specific Adaptations to Imposed Demands.

a. The body specifically responds to the exercise you do.

D. Fitness program components

1. Warm up - Proper warm up exercise before and flexibility exercise after physical exercise will not only improve individual performance, but also reduces the chance of injury from strain.

2. Flexibility - Increases the range of motion in joints by lengthening muscles. Increases blood and oxygen flow to muscles and raises the temperature in the muscles.

3. Stretching - Don't stretch muscles until you have warmed up thoroughly.

a. Dynamic Stretching

b. Static or Sustained Stretching

c. Proprioceptive Neuromuscular Facilitation or

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PNF Stretching

4. Aerobic exercise - stimulates the heart and lungs, improves the body's use of oxygen. Exercises should be vigorous (60-75% of maximum heart rate for 30 minutes with out interruption). Repeated 3 or more time per week.
5. Musculoskeletal exercise - Increasing musculoskeletal fitness through range of motion, resistance, repetition, recovery.
6. Cool down - Tapering off period following exercise. A cool down should last 5 to 10 minutes longer if after an especially hard workout.

E. Strength

1. The ability of a muscle to generate force.
2. Two types of strength
 - a. Absolute
 - b. Dynamic

F. Aerobic Fitness

1. Aerobic fitness is made up of the following components aerobic endurance, cardiorespiratory fitness, cardiopulmonary fitness, and heart rate training. Aerobic exercise requires large amounts of oxygen, use of large muscle groups,

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

rhythmical in nature, and can be maintained over time at moderate intensity.

- a. Primary aerobic activities include running, biking, swimming, cross-country skiing, stair climbing, rowing, and brisk walking.
- b. Secondary aerobic activities include group exercise classes, racquet sports, basketball, and volleyball.
- c. Non-aerobic activities include archery, fencing, softball, croquet, and bowling

G. Other training considerations

- 1. Muscle fatigue - process of the muscle fibers becoming impaired.
- 2. Theories;
 - a. chemical changes in the muscle fibers
 - b. depletion of stored carbohydrate reserves (glycogen)
 - c. failure to remove the waste products of intense exercise (such as lactic acid)
- 3. Immediate Muscle Soreness - most likely due to the accumulation of the metabolic waste product (lactic acid).
- 4. Pain is short-lived and usually subsides soon after the intensity of the exercise is reduced.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Recovery appears to be enhanced by continued, very mild movement.
6. Delayed-onset muscle soreness is an over use injury common to people trying to develop muscular strength.
7. With injury may result in an influx of fluid to the affected area, causing pressure and a local inflammatory response.
8. Over-training - occurs when a person exercises too frequently, too intensely, and/or for too long during each exercise bout.
 - a. Results in an increased risk of injury and a decrease in performance.

H. Physiology of Energy Utilization

1. ATP is the chemical energy for cells
 - a. Glucose transport
 - b. Synthesis: Hormones, enzymes and tissue
 - c. Muscle contraction
2. Body generates ATP three ways
 - a. ATP-PC system
 - (1) anaerobic system; ATP stored in muscle

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (2) severe exercise, 10 seconds or less
 - (3) 50m swim, 100m dash, power lifting
 - (4) No O₂, CP + ADP => ATP
- b. Anaerobic glycolysis
 - (1) breakdown of glucose, O₂ absent
 - (2) high intensity exercise, 10-90 seconds
 - (3) 400m run, 100m swim
 - (4) Glucose/Glycogen=2 lactic acid + 2 ATP
- c. Aerobic system
 - (1) breaks down glucose and fatty acids with O₂
 - (2) occurs in mitochondria
 - (3) moderate exercise > 2 minutes
- 3. Fuel for Exercise
 - a. Carbohydrates
 - b. Fats
 - c. Protein
 - d. We always utilize a combination of fat and carbohydrate at rest and during exercise.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- e. The proportion used is determined by:
 - (1) availability of carbohydrate
 - (2) intensity of exercise
 - (3) duration of exercise
 - (4) cardiovascular fitness level
- 4. Exercise and Fat Burning
 - a. With longer duration exercise, fat tends to be the preferred fuel.
 - b. For long duration exercise, intensity has to be appropriately lower.
 - (1) Most people can't initially maintain high intensity exercise for long duration.
 - (2) For members on Command Fitness Enhancement Program (FEP) who exceed body composition, insure long duration exercise (not just 1.5 mile run three times per week).

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Fitness
Course
A-050-0230

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 1.6

LESSON TOPIC: Strengthening the Mind to
Improve Physical Performance
(Sports Psychology)

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCE:

1. Psyched to Win: Robert Nideffer
2. Sport Psychology Interventions: Murphy
3. Applied Sports Psychology: Personal
Growth to Peak Performance: Williams
4. The New Toughness Training For Sports:
Loehr/Jansen
5. Psychology of Concentration in Sports
Performers: A Cognitive Analysis's:
Moran
6. Psyching for Sport Mental Training For
Athletes; Orlick

INSTRUCTIONAL AIDS:

TERMINAL OBJECTIVE:
Completely supported by this lesson topic:

- 1.0 Upon completion of this unit of
instruction students will perform
required physical fitness tests
without injury to personnel or damage
to equipment

ENABLING OBJECTIVES:
Completely supported by this lesson topic:

- 1.13 Explain how to mentally prepare for
improved physical performance.

CRITERION TEST:

None

HOMEWORK

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements - "I always felt my greatest asset was not my physical ability. It was my mental ability." This quote by Bruce Jenner, Olympic decathlon gold medallist, epitomizes the importance of being mentally prepared for physical activities. Learning how to "build the mind" can help improve your performance on Navy physical tests.

2. Lesson overview

- a. Lesson Topic: Strengthen the Mind to Improving Physical Performance (Sports Psychology)

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

b. Major Teaching Points:

- (1) Goal Setting
- (2) Psychocybernetic Imagery
- (3) "Psyching" Up
- (4) Concentration/Distracton Avoidance
- (5) Mental "Toughness"
- (6) Confidence Building

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. Goal Setting:

Work with you instructor to set realistic, obtainable physical goals that build up to your final goal. Write your goals down, memorize them, state them out loud and constantly review them. The human mind responds favorably to success. Achieving modest goals on the way to the top provides the mind with a "stair-step to success" as you achieve each goal on your journey to your final achievement goal.

Ask student to state some "stair-step" goals toward their final achievement goal.

B. Psycocybernetic Imagery

Most successful athletes have a vivid mental picture of every detail of what they are doing during their physical performance. For instance the professional golfer has thorough awareness of every detail of his golf swing while competing. Most professional athletes develop a mental picture of their physical performance before competition and "practice" by constantly rehearsing this image over and over in their mind; scrutinizing each detail until he image is perfect. Developing a perfect picture and rehearsing it repeatedly can trigger your brain to perform the skills correctly while engaged in the physical activity.

Assist students in developing a mental image of their physical test.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. "Pysching Up"

Arousing the brain can improve physical performance. Karate experts practice the "Kiyai" yell as a way to release adrenaline, a chemical substance produced by the brain that enhances strength and physical performance. Motivational music, singing cadences, HOO YAH's, talking about your physical event and rehearsing psycocybernetic mental images are ways you can "psyche up" before and during your next physical test. "Psyche up" immediately before and during athletic performance. Don't "psyche up" too early before an event because post adrenaline rush use can make you feel fatigued, and "psyched out".

Coach students to perform a loud abdominal, forceful Karate Kiyai yell or HOO YAH until they experience an "adrenaline rush".

D. Concentration/Distracton Avoidance

The inability to concentrate and the loss of concentration can decrease one's performance in a military physical fitness test. Mentally or verbally stating your goals and focusing on your psychocybernetic image during a Navy fitness test are tools to use to stay focused and to avoid distraction.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

E. Mental Toughness

Military combat history is filled with stories of soldiers continuing to fight with injuries that normally would be debilitating because of pain and trauma. During combat, because of adrenaline release, extreme concentration, and the ability to overcome distraction, soldiers can endure excruciating pain, or in many instances, feel no pain at all. Psyching up and utilizing techniques to concentrate and avoid distraction can develop this type of mental toughness. Try these techniques the next time you feel normal fatigue pains or begin to become "psyched" out". AS YOU ARE IN THE TRAINING ENVIRONMENT, NOT COMBAT, EXTREME CARE SHOULD BE TAKEN NOT TO USE THESE TECHNIQUES TO IGNORE INJURIES THAT SHOULD BE TREATED BY MEDICAL!

Question students on what pains should not be ignored with mental toughness techniques.

F. Confidence Building

Confidence to perform a skill is developed by being mentally prepared, by practicing and by performing correct build-up training. Follow your instructor's prescribed workouts to practice and perform correct build-up training. Use goal setting, imagery, "psyching up" and mental toughness techniques to prepare your mind for improved physical performance.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY AND REVIEW

A. State Lesson Objectives.

Turn to cover page for objectives

B. Review Major Teaching Points.

Briefly summarize.

EVALUATION

None

ASSIGNMENT

None

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230
CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.7

LESSON TOPIC: Nutrition and Weight
Control

ALLOTTED LESSON TIME: 2.0 Classroom

INSTRUCTIONAL SUPPORT:

- 1 Classroom instructor
- 1 Assistant Instructor

INSTRUCTIONAL REFERENCES:

- 1. Navy Nutrition and Weight Control
Guide
- 2. Command Coordinator Exercise Leader
Handbook

INSTRUCTIONAL AIDS:

- 1. Powerpoint presentation (optional)

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon Completion of this unit of
instruction students will perform
required physical fitness tests
without injury to personnel or damage
to equipment.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.14 Identify nutrients in food.
- 1.15 Identify nutritional factors.
- 1.16 Explain weight control safety
concerns.

CRITERION TEST:

None

HOMEWORK:

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

Nutrition is an important facet to physical fitness. Knowing the right choices enables you to eat for fuel and not just to fill a void or to satisfy a craving. Making the right choices will give you more energy and help you keep the excess fat off.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

a. Lesson Topic: Nutrition and Weight Control

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

b. Major Teaching Points:

- (1) Nutrition in Food.
- (2) Healthy life style.
- (3) Nutritional factors.
- (4) Safety in weight control.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Nutrition is the study of nutrients and how the body uses them. The study of nutrition is based on concepts and principles that have been tested by scientific method.

1. There are six nutrients in food, carbohydrates, protein, fat, vitamins, minerals, and water.

a. Carbohydrates

(1) 4 kcal/gm

(2) Functions

(a) Provides energy, and is the main fuel source in the body.

(1) Simple

Honey, soda, candy, cookies, cake.

Low nutrition density

(2) Complex

Vegetables, grains, fruits, beans.

High nutrition density and the most efficient fuel source for the body to burn.

(b) Glucose is the main product of carbohydrate digestion.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (c) Glucose that is not needed for energy is stored in form of glycogen.
 - b. Protein
 - (1) 4 kcal/gm
 - (2) Functions:
 - (a) Builds and repairs tissues.
 - (b) Forms enzymes, hormones and antibodies.
 - (c) Plays structural role in all body tissue.
 - c. Fat
 - (1) 9 kcal/gm
 - (2) Functions:
 - (a) Lines and insulates neurons (nerves) in the brain and body.
 - (b) Carriers of certain vitamins.
 - (c) Fat deposits protect and cushion the body. Insulates the body
- Meat, eggs, fish, poultry, beans, peas, nuts, dairy products.
- If not supplied in the diet, malnutrition will result.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

against loss of heat and protects vital organs.

(3) Three types of Fat

- (a) Poly-unsaturated: fish, oils (corn, sunflower)
- (b) Mono-saturated: Oils (olive, peanut, canola), nuts
- (c) Saturated: Meats and dairy products, tropical oils, Solid at room temperature. Tend to raise blood Cholesterol.

(4) Hydrogenation: A process by which liquid oils (poly or mono-unsaturated) are turned into solid fats (hydrogen is blown into the oil for stabilization). Process for making margarine and shortening.

You lose the health benefits of unsaturated fats through hydrogenation.

(5) Reducing fat

Eat lean cuts of beef

Boil or bake

Avoid fried foods

Low fat milk (skim)

Minimize use of cooking oil

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

Reduce salad dressing

Limit nuts, peanut oil

(5) Cholesterol

- (a) Fat like substance found in all foods of animal origin.
- (b) Fat and cholesterol are NOT the same!
- (c) Functions
 - myelin sheaths the nerve fibers (insulates nerves).
- (d) Human body manufactures more cholesterol than others.
- (f) All Americans should limit to 300mg of cholesterol per day.
- (g) Foods higher in cholesterol include: Liver, organ meats, egg yolk, red meats.

d. Vitamins

- (1) An organic substance found in food which is essential in small quantities for growth, health and life.

Deficiency of vitamins causes, scurvy (Vitamin C), beriberi (Vitamin B1),

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

rickets (Vitamin D).

(2) Functions

- (a) Vision
- (b) DNA formation
- (c) Bone ossification
- (d) Red blood cell formation
- (e) Maintenance of skin
- (f) Blood clotting
- (g) Metabolism of carbohydrates, proteins and fats

(3) Types of Vitamins

- (a) Water-soluble: Excesses are generally excreted in the urine, but can be toxic in large amounts.
- (b) Fat soluble
 - Stored in body tissue.
 - Not normally excreted in urine.
 - Overdoses can occur.
 - Vit A - for healthy skin, eyes,

From carrots, beets,

DISCUSSION POINT

bones, hair and teeth. (includes Beta-Carotene).

- Vit E - Helps protect red blood cells and cell membranes.(no toxic symptoms).

- Vit D - assists in the absorption and metabolism of calcium and phosphorus for strong bones and teeth.(can be synthesized by sun).

- Vit K (helps blood clotting).

- Vit C - Inhibits the formation of some cancer causing agents.

- (c) If a person eats a varied diet from all food groups, vitamins are not needed.
- (d) True vitamin deficiency is rare.
- (e) Use of supplements is expensive and generally not necessary.
- (f) Certain populations may require supplements (infants, children, pregnant women, elderly and patients with disease.

RELATED INSTRUCTOR ACTIVITY

green spinach and broccoli..

From vegetable oils, raw seeds, nuts and soybeans.

From fortified milk, fish liver oils.

From leafy green vegetables, milk, yogurt and egg yolks.

From citrus fruits, broccoli, brussel sprouts, peppers and strawberries.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

e. Minerals

Many health food stores market
Vitamins/minerals for sale with unproven
nutrition claims BE CAUTIOUS!.

f. Water

- (1) Essential for life
- (2) Body is approximately 60% water.
- (3) Functions
 - (a) Essential for digestion and absorption of nutrients.
 - (b) Excretion of body waste.
 - (c) Regulation of body temperature.
- (4) Recommendation for adults is 2.5 liters or ten 8 oz cups per day. Any non-caffeine and calorie free fluid can count as water intake.

2. Calorie computation

Multiply grams of each component x #cal/gm

a. Example: 8 oz. whole milk

- 12 gm carbohydrate + 8.6 gm fat +
8.6 gm protein.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

$$\begin{array}{lcl} \text{b.} & (\text{carb}) 12 \text{ gm} \times 4 \text{ cal/gm} & = 48.0 \text{ cal} \\ & (\text{fat}) 8.6 \text{ gm} \times 9 \text{ cal/gm} & = 77.4 \text{ cal} \quad 48.0\% \text{ } \pm \\ & (\text{prot}) 8.6 \text{ gm} \times 4 \text{ cal/gm} & = \underline{34.0 \text{ cal}} \\ & & 159.4 \end{array}$$

3. Alcohol

- a. A source of calories (empty calories).
- b. Provide 7 calories/gr. (not nutritional value)
- c. Alcohol is easily converted to fat in the body.

4. Reliable sources of nutrition information

- a. RD - Registered Dietitian
- b. RDT - Registered Diet Technician
- c. ADA - American Diabetes Association
- d. SCHN - Sports and Cardiovascular Nutritionists
- e. AHA - American Heart Association
- f. AMA - American Medical Association

5. Nutrition Quackery

Cardinal rule of nutrition: Don't believe anything you read about nutrition from someone

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

trying to sell you anything.

- a. Promise quick results without diet and exercise?
- b. Promise quick increase in physical performance?
- c. Is it advertised primarily by use of testimonials (paid)?
- d. Is it expensive?

B. Healthy life style

- 1. Carbohydrate 55-60% of diet. Protein 15% of diet. Fat 30% or less.
- 2. Recommended Dietary Allowances (RDA's)
 - a. Set by food and nutrition board, National Academy of Sciences and National Research Council.
 - b. Designed for practically all people in the U.S.

C. Nutritional factors:

- 1. Economics -
- 2. Geographic -
- 3. Hereditary -

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Social -
5. Ethnic background -
6. Drug use - diet pills
7. Navy/Military - Nutritional factors are unique to Navy/Military.
 - a. Negative factors
 - (1) Mess Hall eating (all you can eat).
 - (2) Deployments (boredom, not enough time).
 - b. Positive factors
 - (1) Exercise part of work routine.
 - (2) Deployments (no couch potatoes).
8. Mess Halls
 - a. Sincere efforts have been made to encourage galley to market and promote healthy menus.
 - b. Newest initiative: CAMP (computer assisted menu planning). CAMP checks for:
 - (1) Color and texture
 - (2) Vitamins A & C
 - (3) Frequency and fats

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

c. CAMP Information:

Naval Supply Systems Command
Attn: Code 512G Rm 815
1931 Jefferson Davis Highway.
Arlington, VA 22241-5360

d. Ordering information:

Navy Nutrition and Weight Control
Guide NAVPERS 15602
0500 LP 317 3800

e. US Navy Way to Good Nutrition
0500 LP 322-93

D. Safety in weight control

1. Fad Diets

2. Protein Powder Supplements

3. Vitamin Supplements

4. Obesity

a. Currently 33% of Americans are overweight or obese.

b. Obesity - Defined as 20% above desirable weight.

c. All populations are increasing in obesity with minority women as high as 50%

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- d. Obesity can lead to:
 - (1) Diabetes and Hypertension
 - (2) Hyperlipidemia and Cancer.
 - (3) Cardiovascular Disease
 - (4) Sleep apnea and gout
 - e. Obesity is a very complex condition
 - f. Obesity is never the result of just one factor, but has many etiologies which may include:
 - (1) Genetic component
 - (2) Environmental/social lifestyle, food and inactivity
 - (3) Behavioral
5. Weight loss
- a. What works?
 - (1) Moderate calorie restriction
 - (2) Regular aerobic exercise, combined with strength training
 - (3) Low fat/high fiber diet
 - (4) Behavioral change

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Body Fat Reduction
 - (1) Must include both nutrition and exercise
 - (2) Nutrition
 - (a) Education
 - (b) Encourage healthy weight loss.
 - (3) Exercise
 - (a) Long duration, low intensity aerobic.
 - (b) At least 30 min., but 45 min. is best.
- c. Goal for weight loss.
 - (1) 500 kcal decrease per day = 3500 per week = 11lb. of fat.
 - (2) When combined with increased activity level, provides 1-2 lbs. weight loss per week.
 - (3) Self monitoring (Food/PT Log).
 - (4) Calorie control
 - (a) Meal planning (Exchange System. Food Guide Pyramid.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (b) Encourage healthy balance of nutrients, portion control, variety and choices.
- d. Moderate Calorie restriction.
 - (1) Men. - 1500-1800 Cal/day.
 - (2) Women - 1200-1500 Cal/day.
 - (3) Calorie needs depend on height, weight and activity level.
 - (4) Control
 - (a) Weight loss is a slow process.
 - (b) Lifestyle changes take time.
- e. What doesn't work?
 - (1) Starvation or severe calorie restriction.
 - (2) Will result in:
 - (a) Lean muscle loss.
 - (b) Loss of fluid.
 - (c) Lowering of metabolism.
 - (3) Once eating returns, member returns to pre-diet body weight.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- f. Eating disorders
 - (1) Anorexia - starving oneself
 - (2) Bulimia - eating, then purging

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

None.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.8

LESSON TOPIC: Fitness Assessment (lab)

ALLOTTED LESSON TIME: 1.5 Lab

INSTRUCTIONAL SUPPORT:

1 PTI instructor
1 Assistant

INSTRUCTIONAL REFERENCES:

1. OCS P9B2000
2. API Q9B0020
3. RSS Q0500600/02
4. RSS Lesson Plan 2.1

INSTRUCTIONAL AIDS:

1. Gym

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.17 Perform relevant physical fitness in-test.
- 1.18 State prescribed personal fitness improvement plan.

CRITERION TEST:

None.

HOMEWORK:

None.

INTRODUCTION

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - A minimum amount of fitness is required to perform tasks. The sit-up, push-up and 1.5 mile run tests are a good way to test muscular endurance and cardiovascular fitness.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview -

Briefly outline material to be covered.

a. Lesson Topic: Fitness Assessment

b. Major Teaching Points:

- (1) Warm-up and stretching
- (2) In-test
- (3) Administration of students who pass in-test
- (4) Administration of students who fail in-test.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Emphasize importance of physical fitness. Explain the appropriate in-test and the action to be taken for pass or fail.

1. Student will be placed on individually tailored remedial program for a period of 1 to 2 weeks.
2. May be given a retest in 1 week, but normally retest after 2 weeks.
3. A student who fails the retest will be placed on remedial for 2 more weeks.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

A. Warm up and stretching

Conduct appropriate warm up and stretches IAW Lesson 1.10

B. In-test

Consult appropriate curricula to determine which in-test the student will attempt. Example. Consult Officer Candidate School for students attempting OCS screen. Consult Naval Aircrew Candidate School curricula for students awaiting NACCS etc.

C. Administration of students who pass their in-test.

Students who pass their appropriate in-test shall be recorded in the Navy Integrated Training System (NITRAS) as passing this course, and shall await class up in their appropriate school

D. Administration of students who fail their in-test.

Using Annex G Develop a fitness improvement plan. This fitness plan determines which lab or labs the students must participate in for the next one to two weeks.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

EVALUATION

A. Perform in-test.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.9

LESSON TOPIC: Strength Training (lab)

ALLOTTED LESSON TIME: 2.0 Lab

INSTRUCTIONAL SUPPORT:

- 1 Classroom instructor
- 1 Assistant

INSTRUCTIONAL REFERENCES:

- 1. Bio-Mechanically Correct
- 2. NSCA-National Strength and Conditioning Association
- 3. The Navy Seal Physical Fitness Guide
- 4. Navy Physical Conditioning Guide 30 Mar 89
- 5. RSS Lesson Plan 2.1

INSTRUCTIONAL AIDS:

- 1. Nautilus Equipment
- 2. Free Weights

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.19 Perform weight-training exercises.

CRITERION TEST:

None

HOMEWORK:

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - Explain to the student, building more muscle increases muscle mass, increasing your metabolism enables you to burn more calories.
2. Lesson overview

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

The purpose of this lesson topic is to introduce the student to weight training.

a. Lesson Topic: Weight Training

b. Major Teaching Points:

(1) Nautilus Training Principles

DISCUSSION POINT

- (2) Nautilus workout
- (3) Sequence of lifting
- (4) Free weights

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

- A. Explain to the students that one can increase his/her fitness through muscle endurance and strength training exercises.
1. Nautilus equipment and free-weights can be used to increase muscle hypertrophy and muscle fiber recruitment.
 2. Specific strength training programs will improve muscle endurance or absolute strength.
 - (a) Performing higher repetitions will enable you to score higher on your in-test.
 - (b) Lower repetitions relate to lower score on in-test.
 3. Strength training sessions should not be conducted on Fitness Assessment days. The PFA requires high intensity performance and muscle soreness may be present. Emphasis should be on active rest e.g. Stretching, Team Sports, and/or Water exercises.
 4. To prevent overuse, muscular endurance training (calisthenics) should not be conducted more than 1 time on strength training and PFA days.

Level 1 10-15 reps
Level 2 12-20 reps
Limit calisthenics to 1 set.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Determine the needs of your students. Use the following information to develop effective workouts. The Course Curricula Model Manager must approve workouts derived from sources other than these references or lesson plan.
- B. Warm-up Exercising/Stretching
 - 1. Perform warm-up IAW lesson 1.10.
- C. Cool down Exercising/Stretching
 - 1. Perform cool down IAW lesson 1.10.
- D. Nautilus Training
 - 1. The primary instructor will explain to the students, they will have 1 or 2 minutes to move to the nautilus machine, properly set it up, perform a minimum of 15 repetitions utilizing max weight for that individual.
 - 2. Weight should be lifted through the count of 2, weight should be lowered through the count of 4, and weight should be lifted smoothly.
 - 3. Repetitions will be 12-20. Once repetitions are complete, the instructor may have the students perform cardiovascular exercise until whistle is blown (for aerobic workout).

Strength Training on resistance machines or free weights using the same muscle groups should not be conducted On two consecutive days. Strength training can be divided into upper and lower body parts and Conducted on alternate Days. Limit upper body to 6-8 exercises and lower body 4-6 exercises **with 1-3 sets**

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Free weights, push-ups and sit-ups may be added to the circuit.
5. The primary instructor will blow the whistle to start and every 1 or 2 minutes thereafter to change machines.
6. Instructors will position the students in the nautilus machines starting with machine one, machine two and so forth.
7. Perform circuit training.
8. After all students have completed all stations, give them a five minute head call and water break. If there is enough time, perform the circuit training again.

E. Sequence of lifting

NOTE: This sequence should be followed so that the muscle does not become too fatigued before attempting close kinetic movements.

1. Large (multi-joint) muscle mass, close kinetic chain, complex movement. Hang cleans, squat and dead lift
2. Large muscles (multi-joint) close kinetic chain, less complex movements. Standing military press and bend over row.
3. Open kinetic chain, movements. Lat pulls, curls, cable row

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Other options. Sit-up and pull-up

F. Free weights

1. Exercise same muscle groups no more than every other day. Ensure that the muscle groups are allowed at least one full day of recovery.
2. Lift a weight you can lift comfortably: 3 sets of 8 to 10 repetitions for strength and 10 to 12 repetitions for muscular endurance.
3. Insure you work all major and opposing muscle groups.
4. More reps better performance on the PRT score.
5. For proper technique refer to reference (1.).
6. Practice safe strength training by seeking proper instruction before exercising with free weights.
7. Use a spotter when weight is heavy, lifting overhead, lifting over the body, when inexperienced with weight or exercise, or when loss of balance may occur (squats)
8. Ensure bars are evenly loaded, outside collars and locks are secure.
9. Be sure to breathe continuously while performing strength exercises. Exhale during the lifting phase and inhale during the lowering or negative phase. Perform exercises through full range of motion.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.10

LESSON TOPIC: Warm-up/cool down

ALLOTTED LESSON TIME: 2.0 Lab

INSTRUCTIONAL SUPPORT:

- 1 Physical Training instructor
- 1 Assistant

INSTRUCTIONAL REFERENCES:

- 1. Cooper Institute
- 2. New Fitness Coordinator Exercise Leader Handbook
- 3 Naval Special Warfare Calisthenics

INSTRUCTIONAL AIDS:

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment.

ENABLING OBJECTIVES:

Partially supported by this lesson topic:

- 1.20 Perform proper warm-up and cool down techniques.

CRITERION TEST:

None

HOMEWORK:

None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Describe nonverbal TTO signal.

Nonverbal training time out may be signaled by placing a hand horizontally over a hand held vertically forming the letter "T".

5. Ask for medical concerns:

- a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medication?
- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Are there any potentially disqualifying illnesses/conditions for which you are currently being treated?

B. State Lesson Objectives

Turn to cover page of lesson plan and

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

paraphrase objectives.

C. Establish Readiness

1. Motivating statements - Proper warm-up prepares the muscle for higher intensity exercise. Stretching will help prevent soreness and injuries.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

- a. Lesson Topic: Physical Training (aerobic)

- b. Major Teaching Points:

- (1) Warm-up exercising/stretching

- (2) Station training

- (3) Cool-down stretching

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

- A. Explain to the students that one should perform warm-up and stretching before an exercise bout.
 - 1. Warm up the muscle; preparing it for higher intensity exercise and to help prevent muscle soreness.
 - 2. Cool down after an exercise bout to help alleviate muscle soreness and to allow the blood to flow to vital organs.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Use the following information to administer warm-up, stretching and cool-down. The instructor may just stretch the muscles affected by the exercise bout.
- B. Warm-up Exercising/Stretching
 - 1. Slow jogging or running in place - 1.5 minutes of easy jogging (three laps around basketball court)
Purpose: warm-up and conditioning
 - 2. Four-Count jumping jacks - 15 repetitions.
Purpose: Warm-up and conditioning
 - a. From a standing position
 - b. Ready, stand with arms at side (begin)
 - c. One, raise arms overhead relatively straight. Feet slightly wider than shoulder width and knees slightly bent. Knees should flex in both positions.
 - d. Two, return to the ready position
 - e. Three, same as one.
 - f. Four, not sounded, (count repetitions).
 - 3. Four count bicycle crunches - 10 repetitions.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

Purpose: Warm-up and abdominal strength/conditioning

- a. From a lying position on the back
- b. Ready, lying on back, raise legs with knees bent to 90 degrees, arms across chest with hands on the shoulders.
- c. One, raise the upper torso off the deck, extending right elbow towards the left knee, at the same time bring the left knee back and touch the right elbow.
- d. Two, the opposite of one
- e. Three, same as one
- f. Four, return to the starting position and count repetitions

4. Bent-knee push-ups - 15 repetitions

Purpose: Warm-up and chest/arm strength/conditioning

- a. From a lying position on the stomach
- b. "Ready," on hands and knees with the arms straight
- c. "Down," lower body toward ground until upper arm is parallel with ground

DISCUSSION POINT

- d. Return to starting position, count repetitions

NOTE:

Perform stretches that apply to exercise bout.

6. Side to Side stretch

Purpose: Stretch the latissimus dorsi

- a. From a standing position
- b. Stand with feet shoulders width apart.
Extend the left arm straight up and grasp the left wrist with the right hand. Slowly lean to the right without bending forward at the waist.
- c. Repeat in the opposite direction

7. Triceps stretch

Purpose: Stretch the back of the arm muscle
(Triceps Brachia)

- a. From a standing position
- b. Touch the left shoulder blade with the left hand and press gently backwards on the left elbow with the right hand.
- c. Repeat for the right arm.

8. Chest stretch

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. From a standing position
- b. Extend arms to the side at shoulder level
- c. Keeping thumbs pointed up, extend arms backward
- d. Either have another person hold the stretch or use a pole for resistance

9. Posterior shoulder stretch

- a. From a standing position
- b. Reach the right arm straight out and across the chest
- c. With the left hand, grasp the right arm just above the elbow
- d. Gently pull right arm across the body
- e. Repeat for other shoulder

10. Trunk twist (seated)

- a. From a seated position
- b. Clasp both hands in front of the chest, twist the upper torso to one side and hold for 10 sec.
- c. Repeat to opposite side

11. Inside hurdler

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. From a seated position
- b. Extend left leg with toes pointing straight up. Bend the right leg until the sole of the right foot is touching the inside of the left thigh. Bend forward at the waist, taking chest toward left knee
- c. Repeat for the right leg

12. Groin stretch

- a. From a seated position
- b. While sitting with the soles of the feet together and back straight, grasp both ankles and pull them as close to the body as possible. Gently pull toes upwards, relaxing the muscles of the inner thigh, allowing the weight of the knees to stretch the muscles. If more pressure is needed, use your elbows to supply a gently pressure, downward on the knees.

13. BUD/S knee (ITB)

- a. From a seated position
- b. Stretch left leg straight out or flat on the deck.
- c. Hook right foot over left leg, near the knee

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- d. Gently twist trunk to the right
- e. Repeat to left

14. Ankle rotation

- a. From the seated position
- b. Bend and bring the right ankle over the left thigh
- c. Hold right ankle with right hand, lifting it above the left thigh
- d. With the left hand, rotate the right ankle clockwise and counter clockwise
- e. Repeat for other ankle

15. Quadriceps stretch

Purpose: Stretch the thigh (Quadriceps)

- a. From a lying or standing position on the stomach
- b. Bend the left leg and grasp the left ankle with the left hand. Pull the foot toward buttocks.
- c. Repeat, for the right leg.

SAFETY NOTE

If pain is felt, STOP stretching at once, and inform the Primary Instructor now.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

16. Abdominal stretch

Purpose: Stretch the stomach (Rectus Abdominis)

- a. From a lying position on the stomach
- b. Push up onto elbows while leaving the hips on the deck. Pull up tall from the waist.

17. Lower back stretch (one or two legs)

- a. From a lying position on the back
- b. Lying on back, curl both knees up to chest while placing hands in the bend behind the respective knee. Hold knees to chest with hands, relaxing back muscles

18. Calf stretch

Purpose: Stretch the calves (Gastrocnemius) and Achilles tendons

- a. From a standing position, next to a wall or stationary object
- b. Stand facing the wall approximately four feet away. Lean against the wall, bring the right leg forward while keeping the left leg extended and left heel flat on the deck.
- c. After calf stretch, bend the left knee and shift weight forward to stretch Achilles tendon.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- d. Repeat a. and b. for the right leg.
- e. Now stretch with both legs extended, heels flat on the deck.

19. Achilles tendon stretch

- a. From the standing position with hands on hips
- b. Stand with feet shoulder width apart and step forward approx. 6 inches with one foot
- c. Bend knees slightly, keeping back straight, with body over back heel. Keep both heels on the ground. Allow weight to be supported by the back leg.

C. Cool Down Stretching

SAFETY PRECAUTIONS

- Stretch within your limits without straining.
- Do not hold your breath while stretching.
- Do not bounce.

NOTE:

Hold all stretches for 10 seconds.

- 1. Rotator cuff stretch - same as warm-up.
- 2. Side to side stretch - same as warm-up.
- 3. Triceps stretch - same as warm-up.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Trunk twist - same as warm-up
5. Cherry pickers - same as warm-up.
6. Inside hurdler - same as warm-up.
7. Groin stretch - same as warm-up.
8. Lower back stretch - same as warm-up.
9. Quadriceps stretch - same as warm-up.
10. Abdominal stretch - same as warm-up.
11. Calf stretch - same as warm-up.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.11

LESSON TOPIC: Aerobic Exercise (lab)

ALLOTTED LESSON TIME: 2.0 Lab

INSTRUCTIONAL SUPPORT:

- 1 Physical Training instructor
- 1 Assistant

INSTRUCTIONAL REFERENCES:

- 1. Cooper Institute
- 2. New Fitness Coordinator Exercise Leader Handbook
- 3. Naval Special Warfare Calisthenics
- 4. RSS Lesson Plan 2.1

INSTRUCTIONAL AIDS:

- 1. Gym
- 2. Versa climber
- 3. Stationary bike
- 4. Head set
- 5. Sound system
- 6. Treadmill

INTRODUCTION

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment.

ENABLING OBJECTIVES:

Partially supported by this lesson topic:

- 1.21 Perform aerobic exercises.

CRITERION TEST:

None.

HOMEWORK:

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Describe nonverbal TTO signal.

Nonverbal training time out may be signaled by placing a hand horizontally over a hand held vertically forming the letter "T".

5. Ask for medical concerns:

- a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medication?
- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Are there any potentially disqualifying illnesses/conditions for which you are currently being treated?

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Motivating statements - Explain to the students, cardiovascular exercises will build a stronger heart. With a stronger heart, the lungs will be filled with blood allowing for a complete oxygen and carbon exchange. Better oxygen exchange will enable you to exercise longer and burn fat.

2. Lesson overview
 - a. Lesson Topic: Physical Training (aerobic)
 - b. Major Teaching Points:
 - (1) Warm-up
 - (2) Cool down
 - (3) Cross county running
 - (4) Air box aerobics
 - (5) Abdominal workout
 - (6) Stationary bike
 - (7) Walk / run
 - (8) Treadmill
 - (7) Group Pace Run

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

- A. Explain to the students that one can increase his/her cardiovascular fitness through aerobic exercises.
 - 1. Various cardiovascular exercise can be use to increase cardiovascular endurance.
 - 2. These types of exercise should be accomplished for a minimum period of 20 minutes maintaining the heart rate at 60 to 75 percent of maximum.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Determine the needs of your students. Use the following information to develop effective workouts. Workouts derived from sources other than these references or lesson plan, must be approved by the Course Curricula Model Manager.
- B. Warm-up Exercising/Stretching
 - 1. Perform warm-up IAW lesson 1.10.
 - 2. RSS perform warm-up IAW RSS lesson 2.1.
- C. Cool Down Stretching
 - 1. Perform cool down IAW lesson 1.10.
 - 2. RSS perform cool down IAW lesson 2.1.
- D. Aerobic Training Options
 - 1. Condition program - The following workouts will be used for strengthening and conditioning:

NOTE:

Cardiorespiratory endurance exercises can be done if weather precludes going outdoors or if the instructor so desires.

- E. Cross Country Running Option
 - 1. The .5-mile X-C running course behind bldg. 3828

Ensure students are well hydrated before, during and after cardiovascular exercise.

DISCUSSION POINT

2. The instructor will select a 1, 2 or 3 mile distance depending on the students' capabilities. (Recommend 2 miles when in the first 2 weeks of training and 3 miles when further in training).

- a. The 2-mile run will consist of 4 laps round the X-C running course.

The goal times are:

Men - 16 minutes

Women - 20 minutes

- b. The 3-mile run will consist of 6 laps round the X-C running course.

The goal times are:

Men - 24 minutes

Women - 30 minutes

F. Airboxing Introduction and Choreography

1. Proper punching form is essential for safety.
2. Stand with knees slightly bent, feet should be positioned shoulder-width apart.
3. Ready defensive position: defensive stance with fists loosely clenched just below face, elbows and forearms protecting ribcage.
4. Avoid hyperextension of the elbow.
5. Throw the following punches with a loose fist, beginning and ending with ready position:

RELATED INSTRUCTOR ACTIVITY

The student may walk and run. Maintaining a heart rate between 60 to 75 percent of maximum.

Demonstrate correct form for ready stance and punches.

Position safety observers around mats.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Punch: arm extends in front (imagine punching opponent's eye)

Lead students through practice of alternating right/left punches.
- b. Jab: arm extends double time in front (imagine jabbing opponent's eye)

Lead students through practice of alternating right/left jabs.
- c. Cross: arm extends crossing slightly in front (imagine punching opponent's nose)

Lead students through practice of alternating right/left cross punches.
- d. Hook: arm remains slightly bent and extends in front (imagine punching side of opponent's jaw)

Lead students through practice of alternating right/left hooks.
- e. Uppercut: punch comes from underneath (imagine punching opponent under the chin)

Lead students through practice of alternating right/left uppercuts.
- f. Flurry: Punch comes from underneath, alternating right and left uppercuts,

DISCUSSION POINT

double time (imagine a series of alternating uppercuts)

Lead students through practice of flurry punches.

- g. Combination: two punches with one arm, followed by a punch with the opposite arm, i.e., a right combination jab would be a right punch, right punch, left jab.

Lead students through practice of a right combination jab and a left combination jab.

- 6. Demonstrate boxer shuffle step:
 - a. To be used throughout choreography of different punches, with exception of flurry punch.
 - b. Shift weight back and forth, right to left, foot weight on front portion of foot.
- 7. After demonstration, have students practice boxer shuffle in ready position.

G. Boxing Aerobic Choreography

(Shuffle throughout entire choreography unless indicated otherwise)

Session One:

- 1. Shuffle, arms ready position (2x8)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Alternate right punch / left punch(8)
3. Shuffle, arms ready position (8)
4. Alternate right jab / left jab (8)
5. Shuffle, arms ready position (8 count)
6. Combination punch: Right punch, Right punch, left jab (8)
7. Shuffle, arms ready position (8)
8. Combination punch: Left punch, Left punch, right jab (8)
9. Shuffle, arms ready position (8)
10. Repeat steps 4 through 9, substituting cross punch for jab
11. Repeat steps 4 through 9, substituting hook for jab
12. Repeat steps 4 through 9, substituting uppercut for jab
13. Shuffle, arms ready position (8)
14. Stand in ready position, flurry (2x8)
15. Simulate jumping rope, skip style, alternating right foot up off ground, left foot up off ground (2x8)

DISCUSSION POINTRELATED INSTRUCTOR ACTIVITY

16. Simulate jumping rope, hopping style, both feet off ground at same time. (2x8)
17. Simulate jumping rope skip style (2x8)
18. Simulate jumping rope, hopping style (2x8)
19. Simulate jumping rope, skip style. (2x8)
20. Simulate jumping rope, hop style. (2x8)
21. Shuffle. (2x8)
22. Walk in place (2x8)
23. Side step (right foot to right, bring feet together, left foot to left, feet together, repeat throughout exercise) arms extended out to sides palms up for 2x8 counts; side step, bend elbows make hand into fist, bring fist to shoulder (pump biceps) for 2x8 counts. Repeat 3 times.
24. Side step, palms up, make small clockwise circles with hands for 16 counts; side step, reverse motion of hands for 2x8 counts. Repeat 3 times.
25. Side step, raise arms over head for 2x8 counts; side step, bend arm at elbow, perform pressing motion over head (shoulder press) for 2x8 counts. Repeat 3 times.
26. Side step, lower arms, shake arms gently, relaxing shoulders. (8)
27. Walk in place (2x8)

DISCUSSION POINTRELATED INSTRUCTOR ACTIVITY

28. Perform boxer shuffle, alternating right/left punch for a period of one minute
29. Jump rope, skip style for a period of one minute.
30. Jump rope, hop style for a period of one minute.
31. Perform boxer shuffle, combination of two right punches followed by a left jab for a period of 30 seconds at student's own pace.
32. Perform boxer shuffle, combination of two left punches, followed by a right jab for a period of 30 seconds at student's own pace.
33. Jump rope, skip style for a period of 30 seconds.
34. Jump rope, hop style for a period of 30 seconds.
35. Perform boxer shuffle, combination of two right punches followed by a left uppercut for a period of thirty seconds.
36. Perform boxer shuffle, combination of two left punches followed by a right uppercut for a period of thirty seconds.
37. Boxer shuffle (2x8)
38. Flurry 2x8 counts.
39. Side to side step (2x8).
40. Walk in place, slowing down pace gradually (4x8)

Have class take a five

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

minute head call/water
break

Session Two:

1. Perform pelvic tilt exercise. Laying on back arms supporting lower back, gently lift pelvis toward ceiling and lower, using abdomen muscles. Two sets of eight
2. Perform bicycle crunches IAW 10.2. Two sets of eight four count bicycle crunches
3. Perform oblique sit-ups right side. Three sets of eight.
4. Perform left oblique crunch. Three sets of eight.
5. Perform abdominal crunch exercise. Three sets of eight.
6. Relax for 30 seconds.
7. Repeat steps 1-6.
8. Perform two or three sets of session at instructor's discretion and based on fitness level of the class

Ensure the students keep the lower back on the deck by placing their hands underneath their buttocks while performing leg lifting exercises. This will add support to the lower back, and will prevent injury.

H. Abdomen workout option/lower body

DISCUSSION POINTRELATED INSTRUCTOR ACTIVITY

1. The abdominal area is divided into two separate entities when doing exercises upper & lower. When concentrating on the upper abs, they are done almost completely alone, but when working on the lower abs the upper abs also get a workout. The obloquies also depend on the upper abs for support. The recommended exercise order to work your abs is to start with your lower abs, then your obloquies, and finally your upper abs. Emphasize that to improve, the focus must be on perfection of exercise to provide strength for full range of motion. Continue by overloading by increasing sets or repetitions.
2. Perform bent knee sit-ups: 3 sets of 10 to 30 repetitions.
3. Perform four count bicycle crunches: 3 sets of 5 to 20 repetitions.
4. Perform side oblique sit-ups: 3 sets of 10 to 30 repetitions for each side.
5. Perform side twists with broomstick: 1 set of 25 to 50 repetitions.
6. Perform knee ups on dip machine: 3 sets of 5 to 20 repetitions.
7. Use abdominal machine: 3 sets of 10 to 20 repetitions.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

I. Versa climber

1. The Versa climber can improve ones' cardiovascular fitness and strength. It is safer on the joints than with running.
2. Stand on foot pegs keeping them parallel to the ground.
3. Then adjust hand pegs to shoulder height.
4. Adjust selector switch to minimum.
5. Step and move hands 6 to 8 inches continually for 20 to 60 minutes maintaining 60 to 75 percent maximum heart rate.

Students should work with in his/hers ability.

J. Stationary Bike

1. Adjust seat height to slight bend in knee.
2. Select program and level to students needs.
3. Continue to pedal for 20 to 60 minutes maintaining 60 to 75 percent of maximum heart rate.

K. Calisthenics

1. Refer to Lesson 1.13

L. Walk / run (3 days per week)

1. The walk/run interval daily progression:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Day 1, 20 minutes walking
- b. Day 2, 4 minutes walking, 1 minutes running X
4 sets
- c. Day 3, 3 minutes walking, 2 minutes running X
4 sets
- d. Day 4, 2 minutes walking, 3 minutes running X
4 sets
- e. Day 5, 1 minute walking, 4 minutes running X
4 sets
- f. Day 6, 1.5 mile individual effort run
- g. Day 7, 2.0 mile individual effort run
- h. Day 8, 2.5 mile individual effort run
- i. Day 8, 3.0 mile individual effort run

M. Treadmill

- 1. Select program and level to students needs.
- 2. Continue to run for 10 to 60 minutes maintaining
60 to 75 percent of maximum heart rate.

N. RSS Group Pace Run

- 1. Perform group pace run IAW RSS lesson plan 2.1

DISCUSSION POINT

SUMMARY

A. State Lesson Objectives

B. Review Major Teaching Points

EVALUATION

None.

ASSIGNMENT

None.

RELATED INSTRUCTOR ACTIVITY

Turn to cover page for objectives.

Briefly summaries.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.12

LESSON TOPIC: Anaerobic Exercise (lab)

ALLOTTED LESSON TIME: 2.0 Lab

INSTRUCTIONAL SUPPORT:

- 1 Physical Training instructor
- 1 Assistant

INSTRUCTIONAL REFERENCES:

- 1. The Navy Seal Physical Fitness Guide
- 2. Exercise Physiology, Third Edition

INSTRUCTIONAL AIDS:

- 1. Stop watch
- 2. 1 mile track
- 3. Orange cones

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.22 Perform anaerobic exercises.

CRITERION TEST:

None.

HOMEWORK:

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - The development of muscular power enhances the ability to perform explosive movements requiring sudden bursts of energy over short or long periods of time. Incorporating interval and sprint training will decrease run times, increasing you score on the 1.5-mile run test. Train smarter not harder.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview -

Briefly outline material to be covered.

a. Lesson Topic:

b. Major Teaching Points:

(1) Sprint Training

(2) Interval Training

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Interval Training

Distance before speed

1. Interval training is based upon proven scientific methods. These methods allow a person to improve their aerobic or anaerobic fitness performance. Intervals contain an exercise followed by a rest period. Intervals may be modified in frequency, intensity, and time. Adjustments can be made to specifically meet the athlete's requirements and goals. Longer intervals (880+) improve endurance and time and engage the slow twitch Slow Oxidative (SO) fibers (primary) and the fast twitch Fast Oxidative Glycolytic (FOG) fibers (secondary). Medium intervals (440) improve speed and engage both types of fast twitch fibers: the FOG (primary) and Fast Glycogenolytic (FG) (secondary) fibers. Shorter intervals (220-) improve speed and engage the fast twitch FG (primary) and FOG (secondary) fibers. To prescribe interval training, ensure the athlete has a good cardiovascular base (endurance/time) before they begin training for speed. The instructor must also determine the athlete's "standard". To determine their standard, they must run their best time at whichever distance they are training for.
2. Intervals permit high intensity exercises for a relatively long period of time, i.e., not many people can maintain a 4-minute mile pace for an entire mile. Most people can maintain four 15-second burst at a 4-minute mile pace with rest periods in between the 15-second run.

Note: 4-minute mile is simply an example. Applies to any set pace which is faster than their current mile pace.

DISCUSSION POINTRELATED INSTRUCTOR ACTIVITY

- | | | |
|----|---|---|
| 3. | To determine run/rest ratios the following formulas may be used: | Higher intensity =
higher rest! |
| a. | For shorter, high intensity anaerobic exercise using FG/FOG fibers the run/rest ratio is 1:3. A one-minute interval would be followed by three minutes of rest. | 220 or shorter |
| b. | For high/medium intensity anaerobic exercise using FOG/FG fibers, the run/rest ratio is 1:2. A two-minute interval would be followed by four minutes of rest. | 440 |
| c. | For lower intensity aerobic exercises using both SO and FOG fibers, the run/rest ratio is 1:1.5. A six-minute interval would be followed by nine minutes of rest. | 880 or longer |
| 4. | Interval training should not account for more than 10% of your total mileage per week. If you run 10 miles a week, interval training should not account for more than one mile. | You must be realistic about the student's fitness level and goals. Adjust workouts accordingly. |
| 5. | Examples: | |
| a. | Example: A student wishes to improve his speed on the 220, $\frac{1}{2}$ a lap. The student runs his fastest 220 at 50 seconds. Therefore his standard his 50 seconds. He can not run faster than his fastest time. He will run 220 intervals at a rate slightly slower (3-5 seconds) than his fastest time: 53-55 seconds per 220 with 2:45 seconds of rest between intervals. | FG/FOG Fibers Anaerobic
Rest Ratio 1:3 |

DISCUSSION POINT

- b. Example: An 8-minute mile can be broken down into intervals of four 440's. This is one lap around a normal high school track. When divided, these 440's should take 2 minutes each. When running these 440's each 440 should be run 1-4 seconds faster than the divided two minutes, one 440/lap should be run at 1:56 with a rest of 3:52. After 4-6 weeks, the student's best mile should drop by a few seconds.
- c. Example: An 8-minute mile can be broken down into 880 yard intervals. You would add 8 seconds to the 880 yard interval, giving you a time of 4:08 per 880. Your rest period would be 6:12.

RELATED INSTRUCTOR ACTIVITY

FOG/FG Fibers Anaerobic
Rest Ratio 1:2

SO/FOG Fibers Anaerobic
Rest Ratio 1:1.5

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Determine the needs of your students. Use the following information to develop effective workouts. Workouts derived from sources other than these references or lesson plan must be approved by the Course Curricula Model Manager
- B. Warm-up Exercise/Stretching
 - 1. Perform warm-up IAW lesson 1.10.
 - 2. RSS perform warm-up IAW RSS lesson 2.1.
- C. Cool down Exercise/Stretching
 - 1. Perform IAW lesson 1.10.
 - 2. Perform cool down IAW RSS lesson 2.1.
- D. Sprints (indoor or outside)
 - 1. Sprint (indoor)
 - a. Divide basketball court into four equal sections by using the free throw lines and half court line.
 - b. Each student shall run to each line consecutively, with a return trip to the start line before going to the next line. After all the lines are completed including the boundary line on the other side of the court, the student running shall tag the next member of their group to start.

Instructor may incorporate various interval distances depending on the students' needs.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

c. Repeat up to 5 times.

2. Sprints (outdoor)

a. Place 4 cones 25 yards apart.

b. Each student shall run to each cone consecutively, with a return trip to the start line before going to the next cone. After all the cones are completed, the student running shall tag the next member of their group to start.

c. Repeat up to 5 times

E. Interval Training

1. Perform anaerobic/aerobic intervals according to students' fitness level and goals IAW guidelines set forth in Presentation.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

EVALUATION

None.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.13

LESSON TOPIC: Calisthenics, Stations or
RSS, level 1(lab)

ALLOTTED LESSON TIME: 2.0 Lab

INSTRUCTIONAL SUPPORT:

- 1 Physical Training instructor
- 1 Assistant

INSTRUCTIONAL REFERENCES:

- 1. Naval Special Warfare Calisthenics
- 2. RSS Lesson Plan 2.1

INSTRUCTIONAL AIDS:

- 1. Ropes, jump
- 2. Dumbbell sets, 20 - 40 lbs.
- 3. Rope, climbing
- 4. Versa Climber

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.23 Perform calisthenics exercises, stations or RSS level 1 exercises.

CRITERION TEST:

None.

HOMEWORK:

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - To score higher on the push-up and curl-up test, incorporate push-ups and curl-ups in the workout.
2. Lesson overview -
 - a. Lesson Topic:
 - b. Major Teaching Points:
 - (1) Perform calisthenics training
 - (2) Perform station training
 - (3) Perform RSS lever 1 exercises

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

- A. Explain to students that one can increase his/her fitness through calisthenics or station training.
 - 1. There are various calisthenics that can be performed to increase aerobic capacity and muscular endurance.
 - 2. Emphasize to improve fitness without injury students must focus on perfecting technique.
- B. Calisthenics 30/10 - Demonstrate prior to workout.
- C. RSS Level 1 exercise - None
- D. Circuit Stations - Demonstrate stations prior to workout.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

- A. State Lessons Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.

Briefly summarize

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Determine the needs of your students. Instructor may modify the workout if they use the reference material. Use the following workout to increase the students' aerobic and muscular capacities.
- B. Warm-up Exercising/Stretching
 - 1. Perform warm-up IAW lesson 1.10
 - 2. RSS perform warm-up IAW RSS lesson 2.1.
- C. Cool Down Stretching
 - 1. Perform cool down IAW lesson 1.10
 - 2. RSS perform cool down IAW RSS lesson 2.1.
- D. Calisthenics 30/10
 - 1. Each exercise will be for a minimum of 30-45 seconds, with a 10-second rest period between exercises. A two-minute rest will be adhered to between each set of exercises. A workout will consist of two to three sets depending on time.
- E. Exercises
 - 1. Side Straddle Hop
 - a. Description: This is a four-count exercise. Begin from a standing position with feet together and hands at sides. On the first count, jump up while bringing hands together

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

over the head and landing with feet apart. On the second count, jump back to starting position. The third count repeats the action performed during the first count, and on the fourth count return to the starting position.

2. Sun Gods (Air Circles)

- a. Description: Extend the arms out and to side and move them in small circles.
- b. Purpose: Endurance exercise for the shoulder muscles.

3. Push-ups (Wide, Standard, and Narrow)

- a. Description: This is a two-count exercise. Begin, stomach down, with hands and feet on the deck, arms extended, and the head facing forward. On the first count, bend the elbows to at least a 90-degree angle, lowering the chest toward the deck. On the second count, extend the arms back to the starting position.
- b. Purpose: Conditioning exercises which primarily incorporate chest and anterior shoulder muscles, secondarily incorporate the triceps and abdominal muscles.

Note: These exercises should be performed first with the hands placed wider than shoulder width (wide push-ups),

Then gradually move the hands closer together

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

so the smaller muscles (i.e., triceps) are worked last. Starting wide circumvents the problems of fatiguing the triceps prior to fatiguing the pectorals.

4. Oblique sit-ups (right and left)

- a. Description: Begin by lying on the back with the hands clasped behind the head. Legs can be either bent at the knees with feet on the deck or bent with the knees towards the chest (feet elevated from the deck), or with one leg crossed over the knee of the opposite leg. Slowly lift and twist the torso, bring one shoulder toward the knee of the opposite leg. Return to starting position. Perform exercise on both sides.
- b. Purpose: Conditioning exercise for the abdominal and oblique.

5. Eight Count Body Builders

- a. Description: This is an eight-count exercise that starts from a standing position.

On the first count, bend the legs and place the hands on the deck.

On the second count, extend both the legs back supporting the body weight with the extended arms (push-up position).

On the third count, bend the elbows, lowering the chest toward the deck. (Push-up).

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

On the fourth count, extend the arms.

On the fifth count; separate the legs while keeping the arms extended.

On the sixth count, bring the legs back together as they were on the fourth count.

On the seventh count, bend the legs and bring them back to the first-count position.

On the eighth count, return to the starting position. (Stand-up).

6. Prone back extension

- a. Description: Lying face down on the deck, hands clasped behind the back, lift the upper torso off the deck, hold, and return to starting position.
- b. Purpose: Conditioning exercise for the back and hip extensors.

Note:

- (1) Avoid hyperextension of the back.
- (2) Placement of the hands alters the difficulty.
 - (a) Behind the back, easiest
 - (b) Behind the head, more difficult

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(c) Straight out in front is the most difficult.

7. Hip Rollers

- a. Description: Lying on your back with legs bent and elevated off the deck, slowly bring both knees down together on one side until the lower back begins to lift off the deck. Bring the knees back to the starting position then repeat on the other side.

8. One-Legged lift

- a. Description: Using one leg to support the body weight, bend the other leg until the thigh is almost parallel to ground and return to starting position. Repeat using the other leg.
- b. Purpose: Conditioning exercise for the hip and thigh muscles.

NOTE:

This exercise is good when equipment and/or weights are unavailable. Squat exercise should be performed with the upper portion of the legs parallel to the ground. Anything lower places excessive stress on the knee.

9. The Superman (prone or kneeling)

- a. Description: This exercise can be performed either lying on the stomach or on the hands and knees. The opposite arm and leg (i.e., right arm, left leg) should be lifted and

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

held for 3 to 5 seconds, then slowly lowered. The same movements should then be made with the other arm and opposite leg.

- b. Purpose: Conditioning exercise for the back muscles and hip extensors.

NOTE:

This exercise helps develop balanced strength between the hip flexors and extensors. It is very safe, and although it may look easy, it can burn after a period of time. Adding weight to the arms and legs makes the Superman more difficult. Avoid hyperextension of the back, the leg should not be raised higher than the hip when in the kneeling position.

10. Dive Bomber Push-ups

- a. Description: This is a two-count exercise. Start by on the stomach with the feet spread approximately 3 feet apart, hands on the deck, elbows fully extended, and hips slightly lifted. On the first count, the upper torso sweeps down toward the deck between and through the hand while bending the elbows. The resting position is the down position of a basic push-up. On the second count, the upper torso sweeps back and up while the elbows extend to return starting position.
- b. Purpose: Conditioning exercise for the forearms, chest, anterior deltoids, and triceps.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

11. Stomach Pump-Ups

- a. Description: Begin by lying on the back with knees bent, feet on the deck, and hands on hips. Then lift and lower the upper torso.
- b. Purpose: Conditioning exercise for the abdominal and hip flexors.

NOTE:

Limit use of this exercise. Keeping the mid to low back on the ground prevents engagement of the hip flexors.

12. Scissors kick

- a. Description: This is a four-count exercise. Start by lying on the back, with hands under the hips, legs extended, and feet together, 6 inches above the deck. On the first count, spread the legs 2 to 3 feet apart. On the second count, bring the legs back together. The third count repeats the first position. On the fourth count, the legs come back together.
- b. Purpose: Conditioning exercise for the abdominal and hip flexors.

NOTE:

Limit the use of this exercise. This exercise has potential for injury to the discs and lower back, always maintain proper technique.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

13. Dirty Dogs

- a. Description: On hands and knees, keeping the legs bent, lift one leg, knee pointing outward, to the end of range of motion. Switch to the other leg.
- b. Purpose: Conditioning exercise for the hip/thigh abductors.

14. Leg Levers

- a. Description: Lying on the back with arms at the sides, slowly lift left leg approximately 2 feet off the deck right leg is kept on the deck, and lowered down again. Repeat with right leg approximately 2 feet off the deck and left leg on the deck.
- b. Purpose: Conditioning for the abdominal and hip flexors.

15. Donkey Kicks

- a. Descriptions: On hands and knees, extend one leg out behind, then bring it back. For the count or time limit, then the opposites leg.
- b. Purpose: Conditioning exercise for the hip extensors.

NOTE:

This exercise may be combined with Dirty Dogs. The same leg would be lifted to the side and returned, then

DISCUSSION POINT

extended behind and returned. **To avoid hyperextension of the back the leg should not be raised higher than the hip.**

16. Flutter Kicks

- a. Description: This is a four-count exercise. Start by lying on the back, with hands made into a fist thumbs on top of index finger. Place hands made into a fist under the upper glutes, legs extended, and feet together, 6 inches above the deck. On the first count lift the right about 1 and 1/2 feet, keeping the left leg straight. On the second count, lift the left leg to same position while returning the right leg to starting position. Third count bring the right leg back up, while returning the left leg to starting position. On the fourth count, shift legs once more.
- b. Purpose: Conditioning exercise for the abdominal and hip flexors.

NOTE:

Limit use and maintain proper technique.

17. Prone Flutter Kicks

- a. Description: This exercise is the Flutter

RELATED INSTRUCTOR ACTIVITY

Limit the repetitions, to the fitness level of the participants, the flutter kick has the potential to injure the lower lumbar region of the back. The flutter kick should not be executed more than two times per week. Hip extensor exercises should also be conducted after the flutter kick to maintain proper balance in muscle conditioning.

Prone flutter kicks work the hip extensor muscles and is a good, exercise to balance out the flutter kick.

DISCUSSION POINT

Kick performed lying on stomach.

- a. Purpose: Conditioning exercise for the back and hip extensors.

NOTE:

Avoid Hyperextension of the back. Exercises that work the hip extensors are highly recommended because they help balance out the hip flexor conditioning.

18. Crunches

- a. Description: Lying on the back with legs bent and elevated off the deck, either place the hands with fingers touching behind the ears or cross the arms on the chest. Lift the upper torso 10 to 12 inches off the ground then return to the starting position.

NOTE:

There are many variations to this exercise. For example, the legs may be bent with feet on the deck, bent with knees towards the chest and feet elevated, or extended vertically. The arms also may be placed in several positions including alongside the body (easiest), across the chest (easy) hands at the temples (difficult), or hands clasped above the head (most difficult).

- a. Purpose: Conditioning exercise for the abdominals.

RELATED INSTRUCTOR ACTIVITY

Hands will not be clasp behind the head. This position of the hands can cause injury to the neck while executing this exercise.

F. RSS Level 1 exercises

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE:

Perform Level 1 exercise only.

1. Perform Cardiovascular Calisthenics workout IAW RSS lesson plan 2.1.
- G. Circuit Stations Training - Start with 1 - 3 students at each station. Commence exercising, sound the whistle every 30 to 45 seconds. Students rotate from one station to the next after each whistle blast. Continue until students have exercised at all stations. If time permits, take water break and repeat. Instructor may change the order of stations, may choose not to use some of the listed stations or may add approved exercises from references.
1. Warm-up Exercising/Stretching
 - (a) Perform warm-up IAW Lesson 1.10
2. Cool down Exercising/Stretching
 - (b) Perform cool down IAW Lesson 1.10
3. STATION 1

Pull-ups: Pull-ups will be performed on the pull-up bars at the south end of the gym. Palms forward, full arm hangs; pull-up until chin passes over the bar, then return to full arm hang position. Repeat. (NO kicking of feet allowed).
4. STATION 2

Rope Skip: Grab the handles of the rope. Throw

1.13-15

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

the rope over head and jump rope. Repeat at fast pace.

5. STATION 3

Sit-Ups: The student will lie on his/her back with his/her arms crossed and hands on the shoulders; legs bent. Next raise the upper body so that the elbows touch the thighs. Then return to the starting position.

6. STATION 4

Bicycle Crunches: Lie on back with fingers at your temples. Legs shall be straight and feet six inches off the ground. Bring one knee towards the chest and the opposite elbow up to touch it then return to the starting position and repeat with the opposite leg and elbow. Repeat this until time has expired.

7. STATION 5

Obliques-Right side: Lie on back with right hand positioned at your temple. Legs shall be bent, and feet shall be 8-12 inches from buttocks. Left arm shall lie on the floor along your left side. Bring right elbow toward left knee by contracting the right side of your abdomen. Return to starting position.

8. STATION 6

Obliques-Left side: Lie on back with left hand positioned at your temple. Legs shall be bent,

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

and feet shall be 8-12 inches from buttocks.
Right arm shall lie on the floor along your right side. Bring your left elbow toward your right knee by contracting the left side of your abdomen.
Return to starting position.

9. STATION 7

Crunches: Lie on back. Place feet 8-12 inches from your buttocks. Position both hands at your temples. Raise your head and shoulders off the ground to about 30 degrees and hold for about one second. Return to starting position.

NOTE: Do not pull with your hands, use your abdomen only.

10. STATION 8

Hand walks: This exercise is performed on the parallel bars. The student will start at full arm extension on the bars and keeping the arms fully extended, travel from one end of the bar to the other. Jump down and repeat.

11. STATION 9

Jumping Jacks: Ensure hands touch over the top of the head. Feet can be moved sideways or fore and aft.

12. STATION 10

Curls: The student will alternately curl the dumbbell of their choice from full extension to the full flexed position.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

13. STATION 11

Body Builders: Student will start in the standing position. Performing a deep knee bend, place both hands on the deck, simultaneously kicking feet out behind, assuming the push-up position. Perform a push up; return feet to a deep knee bend then back to the start position.

14. STATION 12

Push-ups: Push-ups will be started with the palms of the hands and toes on the deck, back and arms straight. The body will be lowered (keeping the back straight) until the elbow breaks a 90° angle, and then return to the starting position, with arms locked out.

15. STATION 13

Dips: Dips will be performed utilizing the dip machine.

EVALUATION

None.

ASSIGNMENT

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230
CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.14

LESSON TOPIC: Water Exercise (Lab)

ALLOTTED LESSON TIME: 2.0 Laboratory

INSTRUCTIONAL SUPPORT:

- 1 Swimming Instructor
- 1 Lifeguard
- 1 EMT-on duty-in the building

INSTRUCTIONAL REFERENCES:

- 1. Navy Swimming and Water survival
Instructor's Manual NETC P-1552/16
- 2. Red Cross Swimming and Diving
- 3. The W.E.T Workout Katz/Kayz
- 4. Water Aerobics Berle
- 5. RSS Lesson 2.1
- 6. Remedial Lesson 1.10

INSTRUCTIONAL AIDS:

- 1. As needed

INTRODUCTION

A. Establish Contact

- 1. Introduce self, give rank, current job.

TERMINAL OBJECTIVE:

Completely supported by this lesson
topic:

- 1.0 Upon completion of this unit of
instruction students will be
perform required physical fitness
tests without injury to personnel
or damage to equipment

ENABLING OBJECTIVE:

Completely supported by this lesson
topic:

- 1.24 Perform water exercises.

CRITERION TEST:

None.

HOMEWORK:

None.

Display name and lesson
topic.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. State training time out policy.
5. Ask about medical concerns
 - a. Has anyone been to medical within the last 24 hours?
 - b. Has anyone taken any medications in the last 24 hours?
 - c. Is there any reason or medical condition because of which you would not be able to participate in training today?

B. State Lesson Objectives

Turn to cover page of Lesson Topic Guide and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - Explain to the students that water exercises provide an excellent medium for cardiovascular exercise. With water exercise less strain is placed on joints. Increasing cardiovascular fitness will enhance your score on the 1.5-mile run test.
2. Lesson overview
 - a. Lesson Topic:
 - b. Major Teaching Points:

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (1) Improving aerobic fitness, strength or speed with water exercise

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

- A. Explain to students that one can increase his/her fitness through aquatic exercise just as one can with land exercise. There are water exercises that improve cardiovascular fitness, strength, and swimming speed. Because of the water's buoyant effect on the body, aquatic exercise is often a safer way to exercise injured body parts. Emphasize that to improve swimming speed students must focus on perfection of stroke technique as well as increased strength and cardiovascular fitness.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.

Briefly summaries.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Determine the needs of your students. Use the following information to develop effective workouts. Workouts derived from sources other than these references must be approved by the Course Curricula Model Manager
- B. Warm-up Exercise/Stretching
 - 1. Perform warm-up IAW reference 2, 5 or 6.
- C. Cool down Exercise/Stretching
 - 1. Perform cool down IAW reference 2, 5 or 6.
- D. Improving Speed:
 - 1. Utilize references 1 & 2 to improve swimming technique
 - 2. Utilize references 1 & 2 to develop workouts to improve speed
- E. Improving general cardiovascular fitness
 - 1. Utilize references 2,3 & 4 to develop cardiovascular workouts
- F. Improving strength
 - 1. Utilize references 2, 3 & 4 to develop strength-building workouts

Water Workout Safety Notes:

Minimum personnel for aquatic exercise labs:
(1) Basic Swimming and Water Survival Instructor
(1) Lifeguard

Extreme care shall be given to ensure that weak swimmers or non-swimmers do not enter deep water unless under the direct supervision of the instructor.

Ensure that students do not become overly fatigued during workouts. Over-fatigue in the water can lead to water emergencies.

Ensure that students are aware of specific TTO signals

Ensure that staff is fully aware of the Pre-mishap plan and their

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

emergency duties.

Do not force all students to do the same workout. "Easy" workouts for good swimmers can be exhausting and dangerous for inexperienced swimmers

G. Stationary shallow water workout

1. Perform Sun Gods for 1 minute.
 - Stand in chest or shoulder deep water, feet shoulder width apart. Arms slightly below water surface.
 - Extend arms out to the side, palms facing down; push downward against the water.
 - Rotate wrist with palms facing upward and lift pushing upward against the water.
 - Extend arms in front and together palms facing each other.
 - Push arms outward against the water and then back towards the centerline.
2. Jog in place for 1 minute.
 - Stand in chest deep water.
 - Jog in place.
3. Kick butts for 1 minute.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- Stand in chest deep water.
- Jog in place and bring heels to buttock.
- 4. Jog in place for 1 minute.
 - Stand in chest deep water.
 - Jog in place.
- 5. High knees for 1 minute.
 - Stand in chest deep water.
 - Jog in place and bring knees up to chest.
- 6. Jog in place for 1 minute.
 - Stand in chest deep water.
 - Jog in place.
- 7. One leg hop x 4 times each leg for 1 minute.
 - Stand in chest deep water
 - Feet shoulder width apart.
 - Lift one leg up and hop on other leg.
 - Bend the leg slightly at impact.
 - Switch to other leg.
- 8. Run fast in place for 1 minute.

DISCUSSION POINTRELATED INSTRUCTOR ACTIVITY

- Stand in chest deep water.
- Run in place fast.
- 9. Jog in place for 1 minute.
 - Stand in chest deep water.
 - Jog in place.
- 10. Cross-country skiers for 1 minute.
 - Stand in chest deep water.
 - Extend same arm and leg forward and opposite leg and arm back.
 - In one movement extend the same side arm and leg back and move the opposite leg and arm forward.
 - Repeat
- 11. Gutter pushups for 1 minute.
 - Stand next to the gutter and facing the wall.
 - Cross ankles and place palms on the edge of the gutter.
 - Press hands downward lifting the body and extending the arms.
 - Lower the body by bending at the elbows.
 - Repeat

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

12. Flutter kicks for 1 minute.
- Stand next to the gutter and facing the wall.
 - Place elbows and forearms in gutter. Hands facing each other.
 - Extend feet out and back.
 - Flutter kick approximately 6 to 12 inches.
13. Gutter dips for 1 minute.
- Stand next to the gutter and facing away from the wall.
 - Place palms on edge of gutter facing away from wall.
 - Extend arms pushing down ward lifting the body.
 - Bend at the elbows, approximately 90° angle, lowering the body.
 - Repeat.
14. Bicycles for 1 minute.
- Stand next to the wall and facing away.
 - Extend arms over and parallel to gutter.
 - Place arms in gutter and support the

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

body while extending the legs out.

- Bring one leg back towards the chest by bending at the knee to a 90° angle. Place the other leg straight out.
- Rotate by bicycling in place.

H. Shallow water work out

1. Breast stroke - (down and back)
 - Perform IAW reference 1 or 2
2. Push-ups - (10)
 - Perform IAW G. 11
3. Dips - (10)
 - Perform IAW G. 13
4. Running - (down and back)
 - Move through the water as fast as possible.
5. Push-ups - (10)
 - Perform IAW G. 11
6. Dips - (10)
 - Perform IAW G. 13
7. Side stroke - (left - down and right - back)
 - Perform IAW reference 1 or 2

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- | | | |
|---|--|---|
| <p>8. Backward running - (down and back)</p> <ul style="list-style-type: none">- Move through the water as fast as possible. | <p>Ensure students do not run into the wall or each other.</p> | |
| <p>9. Push-ups - (10)</p> <ul style="list-style-type: none">- Perform IAW G. 11 | | |
| <p>10. Dips - (10)</p> <ul style="list-style-type: none">- Perform IAW G. 13 | | |
| <p>11. Crawl stroke - (down and back)</p> <ul style="list-style-type: none">- Perform IAW reference 1 or 2 | | |
| <p>12. Push-ups - (10)</p> <ul style="list-style-type: none">- Perform IAW G. 11 | | |
| <p>11. Dips - (10)</p> <ul style="list-style-type: none">- Perform IAW G. 13 | | |
| <p>12. Sideways running - (down and back)</p> <ul style="list-style-type: none">- Move through the water as fast as possible. | | <p>Ensure students look where they are going.</p> |
| <p>13. Push-ups - (10)</p> <ul style="list-style-type: none">- Perform IAW G. 11 | | |
| <p>14. Dips - (10)</p> <ul style="list-style-type: none">- Perform IAW G. 13 | | |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

15. Back stroke - (down and back)
 - Perform IAW reference 1 or 2
16. Push-ups - (10)
 - Perform IAW G. 11
17. Dips - (10)
 - Perform IAW G. 13
18. Crawl stroke - (down and back) X 4
 - Perform IAW reference 1 or 2

H. Swim Conditioning

Description: Swim condition periods will be 1.0 hour maximum/period. Perform no more than three of the conditioning drills during a training period. Drills shall not be repeated during the same training period and no more than twice per day. Only one timed evolution will be performed per day.

Utilization of kick-boards/pull-buoys will be at the instructor's discretion. No drill may be performed with training aids.

NOTE: A 2-minute break will be provided before completing each segment of drill, unless other wise noted.

1. Warm-up swim
 - Swim for 10 minutes using any of the following strokes: crawl, breast or side.
2. Drill one
 - a. Swim 25 yards (set 1)

Students may take a 30 second to 1.5 minute break between sets.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- Utilize crawl, breast or side stroke.
 - Recovery
 - b. Swim 50 yards (set 2)
 - Utilize crawl, breast or side stroke
 - Recovery
 - c. Swim 75 yards (set 3)
 - Utilize crawl, breast or side stroke
 - Recovery
 - d. Swim 100 yards (set 4)
 - Utilize crawl, breast or side stroke
 - Break before next drill
 - 3. Drill two
 - a. Swim 25 yards X 5
 - Utilize crawl, breast or side stroke
 - Break before next drill
 - 4. Drill three
 - a. Swim 50 yards X 3
 - Utilize crawl, breast or side stroke
- Take a 2 minute break
- Take no more than 30 seconds to 1.5 minutes break between 25 yards. Perform the maximum of 5 sets.
- Take a 2 minute break
- Take a 45 seconds rest between 50 sets.

DISCUSSION POINT

- Break before next drill
- 5. Drill four (**NOTE: FOR RESCUE SWIMMERS ONLY**)
 - a. 25 yards underwater X 2
 - Swim underwater and surface only one time for breath.
- 6. Drill five (Time evolution)
 - a. Swim 200 meters
 - Utilize crawl, breast or side stroke
 - Perform in less than 5 minutes and 30 seconds.
- 7. Drill six (Time evolution)
 - a. Swim 400 meters
 - Utilize crawl, breast or side stroke
 - Perform in less than 11 minutes.

RELATED INSTRUCTOR ACTIVITY

Take a 2 minute break

Take 30 seconds to 1.5 minutes between sets. Swim no more than two times.

Normally for rescue swimmers only.

Normally for rescue swimmers only.

EVALUATION

- A. Complete appropriate swim test.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

ASSIGNMENT

A. None.

LESSON PLAN

JANUARY 2005

COURSE TITLE: Remedial Physical Training
A-050-0230

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.15

LESSON TOPIC: Fitness Improvement
Assessment

ALLOTTED LESSON TIME: 1.0 Lab

INSTRUCTIONAL SUPPORT:

1 PTI instructor
1 Assistant

INSTRUCTIONAL REFERENCES:

1. OCS P9B2000
2. API Q9B0020
3. RSS Q0500600/02
4. RSS Lesson Plan 2.1

INSTRUCTIONAL AIDS:

1. As need

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction students will perform required physical fitness tests without injury to personnel or damage to equipment

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

- 1.25 Pass relevant physical fitness in-test.

CRITERION TEST:

None.

HOMEWORK:

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of lesson plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements - A minimum amount of fitness is required to perform tasks. The sit-up, push-up and 1.5 mile run tests are a good way to test muscular endurance and cardiovascular fitness.
2. Lesson overview -
 - a. Lesson Topic: Fitness Improvement Assessment
 - b. Major Teaching Points:
Screen test

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Explain appropriate in-test to student.

Consult appropriate curricula to determine which in-test the student will attempt. Example. Consult Officer Candidate School for students attempting OCS screen. Consult Naval Aircrew Candidate School curricula for students awaiting NACCS etc.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.

Briefly summaries.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION

- A. Determine the needs of your students and consult appropriate curricula to determine which in-test the student will attempt for the out-test.
- B. Warm-up Exercising/Stretching
 - 1. Perform warm-up IAW 1.10.
 - 2. RSS perform warm-up IAW RSS lesson 2.1.
- C. Perform In-test for the Out-test.
 - 1. Administration of students who pass their in-test.
 - 2. Administration of students who fail their in-test.

Consult appropriate curricula to determine which in-test the student will attempt. Example. Consult Officer Candidate School for students attempting OCS screen. Consult Naval Aircrew Candidate School curricula for students awaiting NACCS etc.

Students who pass their appropriate in-test shall be recorded in the Navy Integrated Training System (NITRAS) as passing this course, and shall await class up in their appropriate school

Using Annex G Develop a written fitness

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

improvement plan to these students. This fitness plan shall determine which lab or labs the students must participate in until they are ready to retest.

D. Warm-up Exercising/Stretching

1. Perform cool down IAW 1.10.
2. RSS perform cool down IAW RSS lesson 2.1.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

EVALUATION

A. Perform out test.

ASSIGNMENT

None.